Chapter 1

General Considerations
Design Standards and Policies
Revised December 1999

Chapter 1, General Considerations, contains information to assist the consultant in preparation of all construction plans and document to be submitted to the City of Scottsdale for approval. Additionally, this chapter contains information to assist the consultant in the preparation of public improvement plans and documents specific to the City of Scottsdale Capital Project Management (CPM) division. This chapter also describes the overall development process and includes various checklists as a guideline for those submitting final plans to the City of Scottsdale for permitting.

Section 1.1

General Construction Plan Requirements
Design Standards and Policies
Revised December 1999

Chapter 1
General Considerations

GENERAL CONSTRUCTION PLAN REQUIREMENTS

SECTION 1.1
GENERAL CONSTRUCTION PLAN REQUIREMENTS

1-101 GENERAL COMMENTS

This chapter contains information to assist the consultant in the preparation of all construction plans and documents to be submitted to the City of Scottsdale for approval.

All plans shall conform to the latest revised copy of the City's Design Standards and Policies Manual.

Any deviation from the City's Design Standards and Policies Manual requires prior approval by Development Quality / Compliance Division staff.

1-102 BASIC PLAN REQUIREMENTS

A. General Submittal Standards

1. Plans submitted for review shall have the appropriate professional (State of Arizona) seal, signature, and date on each sheet. The City of Scottsdale does not require landscape and irrigation plans to be prepared and sealed by a registered landscape architect (except for capital improvement plans).

2. Plans shall be prepared on a 24" x 36" sheet size, with a minimum 2" left border and minimum ½" border on other sides.

3. Plans shall be drawn to a horizontal scale of 1 inch = 20 feet and to a vertical scale of 1 inch = 2 feet. A bar scale shall be provided. Unusual situations may warrant the use of a non-standard drawing scale. Prior approval from Development Quality / Compliance Division staff is required.

4. Minimum lettering and numbering size shall be 3/16" for manually drafted or 1/8" (12-point font) for mechanically produced letters, numbers, and symbols. Lettering, numbering, and line work must be uniform and with clear definition to be retrievable after microfilming.

5. Plans submitted to the City for review shall be blueline prints.

6. Plans submitted to the City for approval shall be original mylar drawings or photo-mylar copies of original drawings. Vellum is an acceptable medium for landscape and irrigation plans.

NOTE: Plans, which in the opinion of City staff cannot produce usable microfilm, will not be accepted for review.

B. Cover Sheet Format and Information (See Figure 1.1-1)

1. Title
   Include the name of the project and the content of the plan set.

2. City Name
   Below the title, include the words "Scottsdale, Arizona".

3. Vicinity Map
   Locate the project relative to two intersecting arterial streets.

4. Legal Description
   Provide project property legal description. When a legal description is not feasible, list the township, range, section, and location.

5. Benchmark
   Use City of Scottsdale datum NAVD 1988. A formula shall be provided to translate to City of Scottsdale datum/elevations if any local benchmark is used. See figure 1.1-8 for internet address and benchmark certification notes as required.

6. Additional Information
   Include the following additional information on the cover sheet. (See Figure 1.1-1)

   a. Approval block for signatures (See Figure 1.1-2a and b.) The cover sheet should also include approvals from the appropriate utility companies (See Figure 1.1-3.) If landscape and irrigation plans are not prepared by the same engineer / designer as the civil engineering drawings, a separate landscape approval block (See Figure 1.1-4 and b) shall be provided on the cover sheet of the landscape and irrigation plans. A landscape maintenance block shall also be applied to the cover sheet (See Figure 1.1-5.)

   b. All applicable City project and case numbers in the border along right edge- ¼" (24 point font) minimum lettering size. City case numbers include the zoning, development review board, plan check and native plant permit case numbers.

c. "City of Scottsdale, General Construction Notes for Public Works Construction" (See Figure 1.1-9.)

d. Sheet Index.

e. Utility system ownerships.

f. Other agency approvals as required.

g. Engineer, architect and developer company names, contact persons, addresses, and telephone and fax numbers.

h. Construction quantities (for work in public rights-of-way or easements).

i. Current zoning of the property.

j. Legend – for symbols, non-standard abbreviations, etc.

k. "Blue Stake" note is required on all plans that include excavation of any type.

l. "Key Map" shall be provided on multi-sheet plans to relate plan sheets to project locations and type of improvements.

m. Utility Conflict Coordination: The developer shall forward a copy of the proposed improvement plans and a **No Conflict Form** (Figure 1.1-6 b) to all affected utility companies that will be providing service to the site. A signed **No Conflict Form** from all affected utility companies shall be submitted to Project Review. No approvals or permits will be issued until a form is received from every affected utility company. Based on the information in the completed **No Conflict Forms**, the cover sheet for the improvement plans shall contain a completed **No Conflict Signature Block** (Figure 1.1-3.)

1-103 PRESENTATION OF DESIGN & CONSTRUCTION INFORMATION

A. General

1. Plan layout, graphics, and call-outs must be clearly presented in an uncluttered manner acceptable to Development Quality / Compliance Division staff.

2. Plans shall provide cross-referencing between all sheets that have details, detail call-outs, notes, etc.

3. Plans shall be oriented with north at the top or right side of each sheet. A north arrow and bar scale shall be provided.

B. "As-Builts"

1. Mylar drawings are required to be provided to the City for "As –Building" of construction within public rights-of-way or within easements dedicated to the City. Only original (4 mil) mylar drawings or photographic (4 mil) mylars are acceptable.

1-104 REPORTS AND OTHER DOCUMENTS

Reports and other submitted documents must include the following:

1. All reports and documents shall have the appropriate (State of Arizona) professional seal, signature, and date.

2. All reports and documents shall be provided on 8 ½" x 11" format. Larger size exhibits may be included, provided they are secured inside.

1-105 "SPECIAL PLAN" REQUIREMENTS

A. Haul Route Plan/Permit

1. Estimated dirt hauls of 5,000 cubic yards or more that require use of the pubic right-of-way shall obtain a "Haul Route/Encroachment Permit".

2. Estimated dirt hauls of less than 5,000 cubic yards may require a "Haul Route/Encroachment Permit" as determined by the City at the time of grading plan review.

3. The Public Works Inspection Supervisor will stipulate, review, and approve:

- Haul Routes
- Allow travel times
- Traffic control requirements
- Dust control requirements
- Restoration procedures
- Safety procedures
- Possible additional requirements

XYZ SUBDIVISION

SEWER IMPROVEMENT PLANS
SCOTTSDALE, AZ

CITY OF SCOTTSDALE
GENERAL NOTES

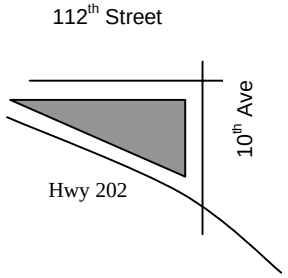
ZONING

ASSESSOR'S PARCEL
NUMBER

UTILITY COMPANIES

BENCHMARK
COS NAVD 88 DATUM

MARICOPA COUNTY
HEALTH DEPT.
APPROVAL



VICINITY MAP

LEGAL DESCRIPTION

SHEET INDEX

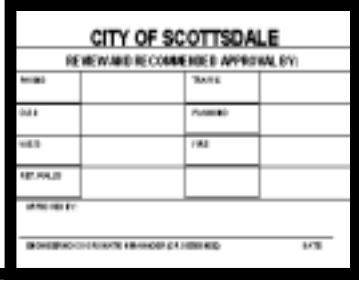
QUANTITIES

NATIVE PLANT PERMIT #

OWNER /DEVELOPER
CONTACT PERSON
NAME, ADDRESS
PHONE NUMBER
FAX NUMBER

ARCHITECT
CONTACT PERSON
NAME, ADDRESS
PHONE NUMBER
FAX NUMBER

ENGINEERING COMPANY
CONTACT PERSON
NAME, ADDRESS
PHONE NUMBER
FAX NUMBER



XYZ SUBDIVISION
SEWER PLANS

SEAL AND
SIGNATURE

SHEET NO.

100 DR 100 (CITY PLAN CHECK NO.)

Figure1.1-1
Typical Cover Sheet Format

CITY OF SCOTTSDALE			
REVIEW & RECOMMENDED APPROVALS BY:			
PAVING		TRAFFIC	
G &D		PLANNING	
W &S		FIRE	
RET. WALLS			
Engineering Coordination Manager (or designee)		Date	

CITY OF SCOTTSDALE REAPPROVAL			
Reappr. #	Sheet #'s Revised	Description of Revision(s)	
PAVING		TRAFFIC	
G &D		PLANNING	
W &S		FIRE	
RET. WALLS			
Engineering Coordination Manager (or designee)		Date	

Figure 1.1-2a and b

Approval/Signature Blocks

NO CONFLICT SIGNATURE BLOCK

Utility	Utility Company	Name of Company Representative	Telephone Number	Date Signed
Water				
Sanitary Sewer				
Electric				
Telephone				
Natural Gas				
Cable TV				
Other				
Other				

Engineer's Certification

I _____, being the person responsible for designing the facilities necessary to serve this development, hereby certify that all of the utility companies listed above, have reviewed this project proposal and all conflicts have been resolved at this point. 'No Conflict' Forms have been obtained from each utility company and are included in this submittal. I also certify that all onsite transformers, cable boxes and any other public/private utility appurtenances are placed such that they do not negatively impact the use or intended use of any dedicated easements or facilities developed with this project including but not limited to stormwater storage basins, sight distance easements and NAOS or other open space easements.

_____ _____

Signature **Date**

Figure 1.1-3

No Conflict Signature Block

LANDSCAPE PLAN APPROVED CITY OF SCOTTSDALE		
CASE #.	**APPROVED BY**	**DATE**
CONSTRUCTION AND INSTALLATION SHALL BE IN ACCORDANCE WITH THIS PLAN AND ANY AND ALL DEVIATION WILL REQUIRE RE-APPROVAL. LANDSCAPE INSTALLATION TO BE APPROVED BY CITY OF SCOTTSDALE INSPECTION SERVICES BEFORE CERTIFICATE OF OCCUPANCY IS ISSUED.		

LANDSCAPE PLAN REAPPROVAL CITY OF SCOTTSDALE		
REAPP. #	SHEET #'s REVISED	DESCRIPTION OF REVISION(s)
CASE #.	**APPROVED BY**	**DATE**
CONSTRUCTION AND INSTALLATION SHALL BE IN ACCORDANCE WITH THIS PLAN AND ANY AND ALL DEVIATION WILL REQUIRE REAPPROVAL. LANDSCAPE INSTALLATION TO BE APPROVED BY CITY OF SCOTTSDALE INSPECTION SERVICES BEFORE CERTIFICATE OF OCCUPANCY IS ISSUED.		

Figure 1.1-4 a and b

Landscape and Irrigation Approval/Signature Blocks

ALL LANDSCAPE AREAS AND MATERIALS, INCLUDING THOSE LOCATED IN PUBLIC RIGHTS-OF-WAY, SHALL BE MAINTAINED IN A HEALTHY, NEAT, CLEAN AND WEED-FREE CONDITION. THIS SHALL BE THE RESPONSIBILITY OF THE _____

(Property Owner, Developer or Homeowner's Association)

FIGURE 1.1-5

Landscape Maintenance Block

CITY OF SCOTTSDALE

"NO CONFLICT" FORM

PART I OF II

PART I must be completed and submitted with the improvement plans.
PART II must be completed before the Project Quality/Compliance Division may approve the improvement plans.

This form has been developed to better coordinate the location of facilities associated with dry utilities relative to improvements proposed on final plan submittals.

PROJECT NAME:_____

PROJECT ADDRESS:_____

ENGINEER:_____

CITY OF SCOTTSDALE PLAN CHECK NO.:_____

Please list the utility company name and the date that the improvement plans were sent to each appropriate utility company. The City will provide Utility Conflict Review for the following City of Scottsdale utilities: water (potable & non-potable), sewer, storm drain, and fiber optic lines.

UTILITY	UTILITY COMPANY	DATE SENT
CITY OF SCOTTSDALE UTILITIES	The Project Quality/Compliance Division will perform a utility conflict review of City utilities for the improvement plans submitted with this document. **No separate utility plan submittal is required.**	
WATER		
ELECTRIC		
TELEPHONE		
NATURAL GAS		
CABLE TV		
OTHER		

CERTIFICATION:

I, _____ , certify that plans have been submitted to the utility
ENGINEER

companies listed in the above table, on the dates listed in the above table, for conflict review.

Figure 1.1-6a

No Conflict Form – Part I of II

CITY OF SCOTTSDALE

"NO CONFLICT" FORM

PART II OF II

PART I must be completed and submitted with the improvement plans.
PART II must be completed before the Project Quality/Compliance Division may approve the improvement plans.

This form has been developed to better coordinate the location of facilities associated with dry utilities relative to improvements proposed on final plan submittals.

PROJECT NAME:_____

PROJECT ADDRESS:_____

ENGINEER:_____

CITY OF SCOTTSDALE PLAN CHECK NO.:_____

"NO CONFLICT" STATEMENT:

As a representative of _____, I certify that I have reviewed the
UTILITY COMPANY NAME

plans for the development proposal named above and, as of today, find no conflicts with regard to any new facilities that my company will need to install to serve this site.

I understand that my company must notify the City of Scottsdale's Inspection Services Department at (480) 312-5757 a minimum of 24 hours prior to installation of any surface facilities.

NAME OF COMPANY REPRESENTATIVE:_____

TELEPHONE:_____

DATE:_____

DATE ON PLANS:_____

Figure 1.1-6b
No Conflict Form – Part II of II

FEMA INFORMATION

In accordance with FEMA and City requirements, the following information must be included on the cover sheet of all plans, which establish lowest finish floor elevations and flood proofing elevations for both residential and non-residential structures.

FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

COMMUNITY Number	PANEL # PANEL DATE	SUFFIX	DATE OF FIRM (Index Date)	FIRM ZONE	BASE FLOOD ELEVATION (In AO zone, Use Depth)
045012					

Engineer's Certification: The lowest floor elevation(s) and/or floodproofing elevation(s) on this plan are sufficiently high to provide protection from flooding caused by a one-hundred year storm, and are in accordance with City of Scottsdale Revised Code, Chapter 37 – Floodways & Floodplains Ordinance.

PLEASE NOTE

From the code of Federal Rules – 44CFR 65.2. Certification of data is a statement that the data is accurate to the best of the Certifier's knowledge.

Certification of analysis is a statement that the analyses have been performed correctly and in accordance with sound engineering practices.

Certification of structural works is a statement that works are designed in accordance with sound engineering practices to provide protection from the base flood.

Certification of "as-built" conditions is a statement that the structure(s) has been built according to the plans being certified, is in place, and is fully functioning.

Rev. 12/93

Figure 1.1-7

FEMA Blocks and Information

BENCHMARKS ON IMPROVEMENT PLANS

To access the City of Scottsdale horizontal and vertical datum information on the internet , go to Http://www.c.scottsdale.az.us/inspections/hv_search.asp

All improvement plans must contain a City of Scottsdale NAD 88 Benchmark, on the cover sheet, with an elevation equation as required. All improvement plans must also contain a statement certifying the datum used for all elevations represented on the plans. This certification shall be included on the plan cover Sheet, immediately below the benchmark, and shall state one of the following:

I hereby certify that all elevations represented on this plan are based on the elevation datum for the City Of Scottsdale Benchmark provided above.

OR:

I hereby certify that all elevations represented on this plan are based on the elevation datum equation to the City of Scottsdale Benchmark as provided above.

In addition, all Plans that include an occupiable structure, residential or non-residential, shall continue to be required to provide a Lowest Finish floor elevation on the plans, including the Engineer's Certification. The format for the Lowest Floor elevation shall be as follows: L.F. 88 + XXXX.YY, where the complete elevation is stated (e.g.: 2695.67, not 95.67 or 695.67) and shall be the basis on the NAD 88 elevation datum, not an equated datum for the site.

Figure 1.1-8

Benchmarks on Improvement Plans

General Construction Notes for Public Works Construction

1. All construction in the public rights-of-way or in easements granted for public use must conform to the latest Maricopa Association of Governments (MAG) Uniform Standard Specifications and Uniform Standard Details for Public Works Construction as amended by the latest version of the city of Scottsdale (COS) Supplemental Standard Specifications and Supplemental Standard Details. If there is a conflict, the latter shall govern.

2. The engineering designs on these plans are only approved by the City in scope and not in detail. If construction quantities are shown on these plans, they are not verified by the City.

3. Approval of plans is valid for six (6) months. If an encroachment permit for the construction has not been issued within six months, the plans shall be resubmitted to the City for re-approval.

4. A Public Works inspector will inspect all works within the City of Scottsdale rights-of-way and in easements. Notify Inspection Services 24 hours prior to starting of construction (Telephone 480-312-5750).

5. Whenever excavation is to be done, call the "Blue Stake Center," 602-263-1100, two working days before excavation is to begin. The Center will see that the location of the underground utility lines is identified for the project. Call "collect" if necessary.

6. Encroachment permits are required for all work in public rights-of-way and easements granted for public purposes. An encroachment permit will be issued by the City upon receipt of payment of a base fee plus a fee for inspection services to be provided by the City. Copies of all permits shall be retained on-site and shall be available for inspection at all items. Failure to produce the required permits will result in immediate work stoppage until the proper permit documentation is obtained.

7. All excavation and grading which is not in the public rights-of-way or not in easements granted for public use must conform to Chapter 70, Excavation and Grading, of the latest edition of the Uniform Building Code prepared by the International Conference of Building Officials. A permit of this grading must be secured from the City for a fee established by the Uniform Building Code.

Figure 1.1-9

General Notes

Section 1.2

Capital Project Plan Requirements
Design Standards and Policies
Revised December 1999

Chapter 1
General Considerations

SECTION 1.2
CAPITAL PROJECT PLAN REQUIREMENTS

PAGE INDEX

FIGURE LIST

APPENDICIES

SECTION 1.2
CAPITAL PROJECT PLAN REQUIREMENTS

1-201 GENERAL INFORMATION

This section contains information to assist the consultant in the preparation of public improvement construction plans and documents to be submitted to the City of Scottsdale Capital Project Management division (CPM).

The contents of this section are provided for the general informational use only. Project specific information must be obtained from the City's project manager. Actual project scope and tasks are contained in individual contract documents. Portions of this section may be incorporated or supplemented by reference into individual project contract documents.

PART A - INFRASTRUCTURE AND ROADWAYS

1-202 DESIGN STANDARDS AND GUIDES

A. Standard specifications and details

1. MAG Uniform Standard Specifications and Details

2. City of Scottsdale MAG Supplemental Specifications and Details

3. ADOT Standard Specifications for Road and Bridge Construction

4. ADOT Standard Drawings

5. Other governmental/utility agency specifications and details

B. Design policies and guidelines

1. City of Scottsdale Design Standards and Policies Manual

2. Project stipulations from the City's Development Review Board

3. AASHTO - A Policy on Geometric Design of Highways and Streets

4. AASHTO - Roadside Design Guide

5. Manual on Uniform Traffic Control Devices

6. ASTM/ASHTO standard specifications

7. Arizona Utility Coordination Committee - Public Improvement Project Guide

8. Other general acceptable design standards, policies and guides

1-203 GENERAL INFORMATION

A. Plans shall be prepared on standard 'D-size' (24-inch x 36-inch) sheets and be clearly reproduced on diazo print paper in a blue or black line format.

B. Upon request, the City will furnish the consultant electronic files in MicroStation or AutoCad, of base drawings shown in the figures at the end of this section. The consultant shall be responsible for the completion of the drawings as applicable to the project.

C. Each sheet, except the cover sheet, shall have a standard City title block in the lower right hand corner. The engineering company's identification shall be in the upper right hand corner of the sheet.

D. Minimum lettering size shall be 3/16 inch for manually drafted or 1/8 inch for mechanically produced lettering and must be legible when reduced 50 percent. Reproductions of drawings must be legible when microfilmed or reduced to 1/2 scale. Adhesive backed appliqués for lettering and/or shading will not be permitted without approval of CPM Plan Review.

E. On all sheets that have maps or plans, North shall be orientated to the top of the sheet or to the right. A North arrow and barscale shall be shown on each sheet. Project stationing shall increase from left to right on the sheet.

F. All construction notes shall be keynoted. Group construction keynote referencing to a specific symbol (square symbols designate demolition and removals, diamond symbols designate relocations and circular shapes for construction items). Number notes uniquely such that one number represents a specific note which only occurs on the applicable plan sheets. Each construction note shall be circumscribed by the appropriate symbol. Upon request, the City will provide a sample format for the Consultant to follow.

G. All projects shall comply with Section 404 of the Federal Clean Water Act. Before the city may issue development permits for a project, this form must be completed and submitted with improvement plans to the CPM Design and Plan Review staff. Consultants are advised to apply to the Corps as early as possible for a Section 404 permit and allow for the necessary processing time to prevent delays in obtaining development permits from the City of Scottsdale. The City of Scottsdale Section 404 Certification Form is included in Chapter 2 of this manual.

H. All projects shall comply with the City of Scottsdale’s Protection of Archeological Resources Ordinance. To help identify, preserve, and protect archaeological sites, an archaeolgical survey and report by a qualified archaeologist is required to be submitted for all public and private developments in the City of Scottsdale. A qualified archaeologist is an individual or firm meeting the Arizona State Museum’s standards and professional qualifications for an archaeologist.

Please contact the Preservation Division (480)312-7013 or your Project Manager or Project Coordinator for more information on archaeology requirements, including which projects may be exempt from requiring the survey and report.

1-204 PLAN SHEET NUMBERING AND SEQUENCING

A. Sheets shall be identified by design discipline as designated below and consecutively whole numbered within each discipline. Additionally, final consecutive numbering of the entire set of plans shall be provided on each sheet. The following sheet numbering prefixes are commonly used, and the consultant shall review the sheet sequencing and/or intended numbering with the City's project manager:

Public Works Projects
G=General
P=Paving
SD=Storm Drain
I=Irrigation
SS=Sanitary Sewer
W=Water
TS=Traffic Signalization/Signing/Markings
L=Landscape and Irrigation
S=Structural
M=Miscellaneous Plans By Others
RW=Right of Way

B. Plan sheets shall be sequenced as follows:

Order	Sheet No.	Description
1	G1	City cover sheet
2	G2	Notes, legend and key map sheet
3	G3	Quantity summary sheet
4	P1..P_	Paving plans, profiles and details
5	SD1..SD_	Storm drain plans, profiles and details
6	SD_..SD_	Profiles for catch basins and connecting pipe
7	I1..I_	Irrigation plans, profiles and details
8	SS1..SS_	Sanitary sewer plans, profiles and details
9	W1..W_	Water line plans, profiles and details
10	TS1..TS_	Traffic signal plans, schedules and details, traffic signing and pavement markings
11	L1..L_	Landscaping and irrigation plans, notes, legend and abbreviation sheet, landscaping sheets, irrigation sheets, detail sheets
12	S1..S_	Bridge and structural plans and details
13	M1..M_	Plan sheets by others: electric, telephone, gas, irrigation, cable television
14	RW1	Right of Way Strip Map

1-205 DETAILED SHEET INFORMATION

A. Cover Sheet
The City will furnish an electronic drawing file of the cover sheet upon request (see figure 1.2-1). The Engineer will add the following:

1. Project title, CPM project number, bid call number
2. Vicinity map with section, township and range noted
3. Sheet index

4. Engineering company identification and engineer's seal
5. Other agency approval blocks as applicable
6. City benchmarks for project - two (2) required on NAVD 1988 datum
7. Applicable City assigned plan review, development review and native plant numbers assigned by Project Review when submitted.

B. Notes, Legend and Key Map Sheets

1. Key Map - Show all intersections, rights-of-way, and key to all plans with stations
2. Legend of symbols used for existing and design elements
3. List of abbreviations used in plan set (other than as shown in the MAG Specifications)
4. Include City of Scottsdale general construction notes for Public works construction (see figure 1.2-14) in addition to any special project notes generated.

C.Quantity Summary Sheet

The City will provide a blank format for quantity summaries upon request (see Figure 1.2-3). The sequence number preceding the bid item should correspond to the construction note number on the plan sheets.

D. Paving Plan, Profile and Detail Sheets

1. Sheet Format:

a. Single plan and profile sheet, Highway Federal Aid Sheet - Plate 1 format, scale: 1 inch = 20 feet and not to exceed 500 feet per sheet; separate profiles for each curb and gutter and crownline at 1 inch = 2 feet vertical scale and 1 inch = 20 feet horizontal, using 3 inch separation between profiles.

b. Removal, construction, and other notes shall be categorically and numerically referenced and listed on the right-hand side of sheet. Use the same number for like work on all sheets including the quantity summary sheet. Categorize notes to type of operation, i.e. demolition/removal notes are first followed by construction notes, relocation notes, sheet notes and sheet cross-reference notes. Quantities shall be shown within each construction note and duplicated to the quantity summary sheets. The City will provide a sample format for the Consultant to use upon request.

c. In the area of match lines, portions of the same street are not to be repeated on separate sheets. Match lines shall show stationing and adjacent sheet number.

d. Intersections shall not be cut by match lines and shall be complete from BCR to ECR on same sheet. When intersecting streets are to be improved beyond ends of curb returns, additional plan and profile sheets shall be used to detail the intersecting street. The intersections at the beginning and end of the project shall be fully shown.

2. Horizontal Geometrics:

a. City major streets are typically centered along section lines, from section corner to section corner. Bearings need not be shown on plans; but deflection angles at alignment changes and all angles of intersecting streets shall be shown. All section corners, tangent points, P.I. of curvilinear sections, beginning and ending taper points and monument lines of all intersecting streets shall be labeled and stationed. Survey markers shall be installed per MAG Standard Details.

b. Show centerline stationing on plan and profile. Stationing numbers should be chosen to prevent "negative" stationing. The project need not start with 0+00. On curved sections the stationing shall be along the centerline of the curve and not the tangent lines.

c. Curve data shall be shown on same sheet as the curve. Stationing shall run from South to North and from West to East.

d. On streets that are not centered on the monument line, the stationing shall be along the construction centerline, which shall also be the proposed crown line, unless superelevation or other conditions dictate otherwise. On such streets, the right-of-way will be measured from the monument line. The offset between the monument line and construction centerline shall be shown and all offsets shown for new construction shall be from the construction centerline.

e. Design on intersecting streets shall be done in accordance with the City furnished geometrics and guides. Care must be taken to ensure a smooth grade in all directions through intersections. Special design work sheets are required to show profiles on the intersecting street to ensure smooth grades in both directions. These work sheets are to be included with the grade and alignment submittals (see Figures 1.2-5 & 1.2-6).

f. Curb return radii shall conform to type of street intersection as described in COS design criteria and procedures. All curb returns at intersecting streets (including along frontage roads) shall have sidewalk ramps conforming to ADA standards. In areas south of the CAP Canal (non-hillside development), street intersections with 30 feet return radii shall have MAG Std. Det. 231 ramps; street intersections with 25 feet return radii shall have MAG Std. Det. 232 ramps; driveways with curb returns shall conform to current COS Details. All curb return radii shall be dimensioned on the plans to back of curb.

g. On all existing roadways and intersecting streets, the plans shall show dimensions from monument line to right-of-way and to existing back of curb. Existing medians, sidewalks, etc. shall be clearly dimensioned and labeled.

h. All new pavements shall be fully dimensioned to the edge of pavement or back of curb and tied to horizontal control lines.

3. Topography and Notation:

a. Show all subdivision names, block numbers, lot numbers, property splits, lot dimensions, addresses, names of major businesses, schools, fire stations and other public facilities.

b. Show final right-of-way as a heavy ink line. Show original right-of-way where it differs from the new right-of-way line with a lighter weight line.

c. Show all existing alleys and easements with proper designations and dimensioning. Show all new easements required for the project, including temporary or permanent.

d. Show all underground utilities and appurtenances and their distances from the monument line and label size, type of material and type of utility. Utilities that are abandoned or to be abandoned shall be indicated as well as those to be removed. Any utilities to be constructed prior to the project shall be shown and so indicated. Underground electrical lines shall be denoted as direct burial cable or conduit enclosed cable.

e. Show all buried fuel tanks. When the new right-of-way is in an area where such tanks may exist, a special effort shall be made to check for the possibility of their existence.

f. Show existing underground concrete pavements. Core borings shall be utilized to determine the existence of such pavements when authorized by the City's project manager.

g. Show existing site conditions and topography to at least 10' beyond the new right-of-way line or any required easements. Use standard MAG symbols where applicable. Show all information for buildings, canopies, asphalt aprons and overhangs within 30 feet of the new right-of-way. Existing site information shall be screened approximately 40 to 60 percent, to the satisfaction of CPM plan review.

h. Show all signs within the new right-of-way and 20 feet beyond the right-of-way. Electric signs shall be so noted and their source whether overhead or underground identified.

i. Show diameter and variety of trees and shrubs within 30 feet of the new right-of-way and within temporary construction easements. The City will determine the disposition of all trees and shrubs. If slight changes in alignment could be made to save valuable trees or the sidewalk could be realigned by acquisition of additional right-of-way, it should be brought to the attention of the City's project manager at the earliest time possible.

j. Show all utility poles. Differentiate between power poles with street lights and those without. Also show all traffic signal poles and their appurtenances.

k. Show all subdivision entrance structures and indicate any utility connections. When these interfere with new construction they should be relocated or reconstructed. At times it may be necessary to obtain right-of-way for these structures.

l. As-built drawings or sufficient elevations shall be obtained to indicate the direction of surface flow on all intersecting streets, frontage roads and parking lots. The direction is to be shown by a small arrow.

m. Where certain items such as monuments, water valves, water meters (sizes if relocation is indicated) etc., are shown on City utility maps or record drawings but are not located they shall be shown and labeled "not found" on the plans.

n. Show all existing sprinkler systems. Where new construction requires alterations, these sprinkler systems must be put back in operation by the Contractor and shall be so noted on the paving plan sheets (or landscape plans).

o. The Consultant shall investigate (where new right-of-way is required) if any disconnected water or sewer connections (stub-outs) are completed to the old right-of-way line only. Where this occurs the service connection should be shown (size and material) to be extended to the new right-of-way line by the Contractor. Galvanized services will be replaced in their entirety. The City will furnish a new meter if the old meter is faulty.

p. Show all existing safety curbs. Call for relocation of existing safety curbs where required and the addition of new safety curbs where they are required.

4. Profiles and Grades:

a. Construction bench marks shall be a maximum of 1,000 feet apart and each sheet shall refer to the nearest bench mark. All bench marks must be based on the U.S.C.& G.S. datum and at least two (2) bench marks on a project shall be existing City monuments. Elevations of City bench marks will be furnished by the COS Field Engineering section upon request. Some areas of the City have experienced considerable ground subsidence. If the Consultant discovers

variations from recorded City Bench Marks, he shall bring this to the attention of the COS Field Engineering Office (312-5750).

b. The proposed construction centerline profile shall show the profile of the existing surface at the construction centerline. The proposed curb and gutter profiles shall also show the existing surface line at the location of the new curb line. If the proposed curb and gutter are adjacent to the existing curb of a frontage road, the existing surface line shall be omitted and the top of the existing curb of the frontage road shall be shown.

c. Top of embankments at ditches and bottom of ditches shall not be shown to express existing surface lines. They may be shown in addition to existing surface lines if properly labeled.

d. Existing ground elevations along the right-of-way lines shall be indicated by tick marks along the left and right gutter profile lines at approximately 100 foot intervals.

e. If the ditch bottom or banks occur at the property line, the elevation to be shown in the profile for the property line shall be taken beyond the ditch on "average" ground and the offset noted.

f. Existing roadway profiles shall be extended to a minimum of 300 feet past the ends of the project to assure a smooth transition between the existing and new roadway.

g. Elevations must also be shown in the profile at all driveways, sidewalks and parking lots. Elevations of building floors within 30' of the property line shall also be shown in the profile and any other buildings that appear to be low compared to street grades. Sufficient elevations beyond the property line shall be recorded in the field notes at driveways that may require significant alterations beyond the property line.

h. Cross section work sheets (scale of 1"= 5' at 50 feet intervals) depicting the proposed street cross section in areas where new curb and gutter is retrofitted into existing pavement and less than one lane of pavement adjacent to the curb is removed and replaced are required to insure smooth cross sectional transitions.

i. Sufficient elevations shall also be taken and recorded in the field notes of all parking areas, driveways and private property to be certain that the property will properly drain with the new curb grades. Consulting Engineers are responsible for proper drainage of paved areas on private property if drainage was into public streets prior to improvements. The importance of this survey information, its recording on the profiles and its use in setting proper street grades cannot be overstressed. No unwarranted ponding on paved areas on private property will be permitted. If, in the opinion of the City, this information is not sufficient to properly check the proposed grade, the plans will be returned to the Consultant.

j. Elevations of existing water valve nuts shall also be shown in the profile with the appropriate symbol. It is the responsibility of the Consultant to uncover these valves, obtain the elevations and replace the cover and any excavated pavement.

k. Longitudinal and transverse grades shall be designed for proper drainage following the guidelines of COS design criteria, standards and ordinances. Proposed curb grades shall be set to drain all paved adjacent property. Where this is not possible, catch basins may be required beyond the right-of-way lines, but only where permanent right-of-way or permanent drainage easements are obtained for the catch basin. Where existing curbs on adjacent frontage roads exist, the top of the new curb must be set very closely to the top of the existing curb (within 0.4 foot maximum) to facilitate landscaping and watering. Where the grades exceed this limit, no landscape watering will be allowed.

l. In projects with flat longitudinal slopes, the grades shall be set to prevent sump conditions that may flood private property during large storms. City Ordinance stipulates specific requirements for depth of water in roadways and minimum numbers of clear lanes during storm runoff. The Consultant shall obtain and design to these requirements.

m. Where possible, grades should be set to reduce high crowns where they exist. This will assist the flow of floodwaters and prevent backup into houses. Care should be used in lowering existing streets since excavation to construct pavements may uncover existing utilities and possibly change drainage patterns.

n. Any streets with horizontal curves sufficient to require superelevation shall be designed in accordance with AASHTO guidelines. The Consultant is advised to discuss this subject with the City prior to design of superelevation. Limitations on the use of super-elevations are described in COS design criteria and standards.

E. Storm Drain Plan, Profile and Detail Sheets

1. Storm Drain Design Sheet

Alternate storm drain piping materials shall be summarized on a single sheet and shall reference types of materials, design dimensions, material strengths, bedding conditions, soils information, etc. The City will provide a sample format for the Consultant to use upon request (see Figure 1.2-7).

2. Sheet Orientation:

Sheets are to be oriented and have the same horizontal scale as the paving plans (typical vertical scale: 1 inch = 5 feet).

3. Topography and Notation:

a. Storm drain drawings shall show all of the existing utilities and any new utilities proposed within a minimum of 30 feet of the centerline of the storm drain. It shall also show other existing topography as shown on the paving plans (or to within 30 feet of the drain centerline if not located within right- of-way) that is pertinent to drainage.

b. These drawings shall show in plan all proposed storm drain pipe, manholes, catch basins, connector pipes, pipe collars, and other drainage appurtenances. These items shall be listed referenced to standard details, and plan sheet quantity noted in the right-hand column. Add reference to sheets where details or sections are shown.

c. Storm drain main lines, connector pipe and catch basins shall also be shown in plan on the paving sheets. A reference to the appropriate sheet number for the storm drain plans shall be shown on each paving plan sheet.

d. If the storm drain main is existing and no separate storm drain plans are required, the catch basins and their lines shall be called out on the paving plans. Details of catch basin with connecting pipes shall be included with paving details.

e. Conflicts with existing utilities shall be noted in both plan and profile.

4. Horizontal Alignment:

The Consultant shall determine the most satisfactory alignment based on location of existing facilities. Desired location is near the centerline of the existing or proposed street. Existing utilities crossed under at an angle less than 45 degrees may require special design considerations and should be avoided. Location of the storm drain should consider the interference of water main thrust blocks and the need to provide maintenance on either system.

5. Profiles and Grades:

a. An overall system profile sheet shall be included with the set and shall show the pipe sizes, grades, and locations of manholes and lateral connections. The hydraulic grade lines shall be shown along with the existing/proposed finish grade over the pipe. Crossing utilities including sanitary sewer lines, water lines greater than 12 inches, storm drain lines, and major electric and telephone feeds shall be indicated at their proper locations.

b. The storm drain pipe and manholes shall be shown in profile. The pipe size and the slope to 4 significant figures shall also be shown in the profile. The existing ground over the proposed pipe and the proposed grade shall be shown.

c. Design of storm drain systems shall be per COS design criteria and standards. The Consultant shall obtain the applicable criteria and standards and arrange for a consultation with the City Flood Plain Administrator prior to starting design of the storm drain system. This is very important since the drainage areas to be considered in the design may vary.

d. Generally for maintenance reasons, the minimum pipe size required for the main is 24 inches and the lateral collector pipe shall be 18 inches. Smaller diameter pipes require staff approval and will be considered by the City if utility conflicts may be avoided and the pipe has sufficient capacity to carry the design flows.

e. All existing or proposed utilities crossing the new storm drain shall be shown in the profile at their proper “as-built”, “field-verified”, or “potholed” locations.

f. Prefabricated fittings shall be used for all new horizontal or vertical bends where feasible. Locations of bends or fittings shall be called out on plan and profile.

F. Profiles For Catch Basins and Connecting Pipe

1. Sheet Orientation:

a. These sheets are to be all cross-section sheets, Highway Federal Aid Sheet - Plate 3 format.

b. Sheets shall have the appropriate COS title blocks.

c. Catch basins and their connecting lines shall be drawn facing North or facing East.

d. Scale is typically 1 inch = 5 feet; and the horizontal and vertical scale shall be the same.

2. Profiles and Grades:

a. Profiles shall show the correct top of curb elevation at the catch basin and a cross section of the proposed catch basin. Invert elevations of the connector pipe shall be shown at the outlet from the catch basin and the inlet to the storm sewer as well as any grade breaks. The size of the pipe and the percent of slope (to 4 significant digits) shall be shown. Also, show the catch basin type and size, the station and offset, and a cross reference to the storm drain plan and profile sheet where catch basin is shown.

b. All existing utilities crossing the proposed pipe shall be shown at their proper location and elevation. As-built drawings shall be used to obtain the correct elevation. When elevations are available from as-built plans the elevation shall be called out on the profiles. Where no elevations are available the utility shall be located from the best available information.

c. A note should be included on each sheet stating that the elevation is unknown unless noted on the profile. Where elevations of existing utilities are not known and their existence could be in conflict with the proposed pipe or catch basin, the Consultant shall coordinate with the respective utility company for potholes to be dug to determine the exact elevations and horizontal location.

d. Utilities located in the field shall be shown in plan and profile at their correct location and noted in profile with their exact elevation and the notation "potholed elevation".

e. Minimum vertical clearance between the proposed pipe and all existing utilities other than SRP pipe shall be per MAG Standard Specifications or the City of Scottsdale Supplement thereto. SRP requires 2 feet horizontal clearance with underground utility lines, poles, fences, buildings, etc., and 1 foot vertical clearance with underground utilities. On special occasions they will permit 3 inches horizontal clearance with catch basins.

f. Utilities that will require relocation shall be noted in the cross sections and shown at the existing and new locations.

g. All pipe collars and pipe supports required shall be called out on the cross section. Prefabricated tees will be utilized whenever possible.

G. Irrigation Plan, Profile and Detail Sheets

1. Sheet Orientation:

Sheets shall have the same orientation as the paving plan sheets.

2. Topography and Notation:

Paving removal items shall be called out on the paving sheets, not on the irrigation sheets. When Salt River Project does their own construction, removals to be done by Salt River Project forces shall be called out on the paving sheets and it shall be noted that they will be removed by Salt River Project forces. Construction items for irrigation work shall be called out on the irrigation sheets. If Salt River Project is to do its own construction, the construction items shall be listed and noted to be done by Salt River Project.

3. Horizontal Alignment and Design

a. Private irrigation pipe, ditches and structures shall be placed on private property using a temporary construction easement, if it is necessary to replace them. If, in placing pipe on private property, it would result in the loss of existing trees or landscaping or cutting of planters or buildings or concrete pavement parking areas; the private irrigation pipelines may be placed under the proposed sidewalk if there is no conflict with SRP. Private irrigation ditches and structures, however, shall be placed on private property.

b. SRP irrigation pipe may be placed under the proposed sidewalk; however, their structures are to be placed on City right-of-way behind the sidewalk.

c. In locating private or Salt River Project pipe, care should be used to allow space for utility poles, street lights or traffic signal pole bases along the property line and sufficient horizontal clearance between any structures and the proposed pipe.

d. The Consulting Engineer, at the earliest opportunity, shall notify the Salt River Project, in writing, of the project and request a design schedule and estimated design cost. A copy of this request and the proposed schedule shall be sent to the City. The Consultant shall supply all available information on the location of other utilities, street grades, and street alignment to the Salt River Project and cooperate with them so that the final design will meet their standards and be most economical for the City.

e. The Consultant shall send a set of grade and alignment plans to Salt River Project at the same time they are submitted to the City for review and request them to determine the right-of-way requirements for their facilities. It is essential in order to meet right-of-way schedules that these right-of-way requirements be submitted to the City as soon as possible.

f. A second set of grade and alignment plans shall be sent to Salt River Project after their approval by the City and after any corrections have been made. Based on these plans, Salt River Project shall proceed with the design. Salt River Project will prepare a red-line preliminary design and transmit it to the Consultant. The Consultant shall review the red-line preliminary design and return it to Salt River as soon as possible, with his comments. Salt River Project will then complete the final design.

g. If either existing private or Salt River Project irrigation pipes can remain as is, the Consultant shall investigate the type of pipe and its condition and the elevation of pipes to be sure enough cover will be provided over the pipe even during the time of construction and that the existing pipe is in good enough condition to remain. Consultant shall meet with SRVWUA to determine the requirements to be met for the project.

h. On private irrigation lines and ditches, the Consultant shall obtain the delivery quantities and irrigation schedule from the Water Master. The Consultant will be completely responsible for the design of private irrigation systems. Once again, the determination of right-of-way requirements at an early date is essential in maintaining the time schedule. The Consultant shall submit these requirements to the City as soon as possible. Hydraulic computations on private irrigation shall be furnished to the City. All work involving private irrigation, or SRP irrigation shall be coordinated with the City's project manager.

i. Normally Salt River Project will decide to construct all of their facilities. If so, the Consultant shall show Salt River Project's design on the plan of the paving sheets and shall carefully show the proper notation as to which work shall be done by the City's Contractor and which will be done by Salt River Project. Mylar plans of Salt River Project work are to be placed at the end of the construction plans for a permanent record.

4. Profiles and Grades:

Profiles shown for irrigation pipes shall show the proposed surface grades over the centerline of the pipe as well as the invert profile of the pipe and the top of the pipe. Top elevations shall also be shown for all irrigation structures. Grades of pipe shall be established which will provide sufficient cover over the pipe and will also work efficiently hydraulically.

H. Sanitary Sewer Plan, Profile and Detail Sheets

1. Sheet Orientation:

Sheets shall have the same orientation as described in the paving plans section.

2. Topography and Notations:

a. The same siting information as required for the paving plan base sheets shall be provided for the sanitary sewer plan sheets.

b. If the sewer is located in an easement outside the right-of-way, all existing site conditions shall be shown to 30 feet minimum along each side of the pipeline.

3. Horizontal and Vertical Control:

a. One construction benchmark shall be established for every 1000 feet minimum along the alignment of the pipeline. At least two City benchmarks shall be referenced and tied into the project.

b. Stationing will be established along the pipeline, increase from lower to higher invert elevations, and be referenced to street centerline or monument lines at manholes or angle points where possible. Where not possible, the use of bearings and distances along the pipe centerline shall be utilized. The beginning and end point of the sanitary sewer line shall be tied to the nearest monument point.

4. Soils Testing:

a. The geotechnical investigation shall be prepared as described under the general requirements for this project.

b. Additionally, soils boring logs shall be provided at a minimum spacing of 1320 feet along projects whose average trench depth exceeds 10 feet. Boring shall extend to 24 inches below the proposed bottom of the trench and be of sufficient diameter to allow for laboratory testing and analysis. Locations of borings shall be identified on the plans. Soil boring logs shall be included on a geotechnical report along with a discussion of any particular bedding, shoring, excavating or dewatering considerations.

5. Profiles and grades:

a. Profiles shall indicate the existing and design grade line over the pipe and shall include the "as-built", "field-verified", or "potholed" locations of all crossing utilities.

b. Vertical locations of storm drains and sanitary sewers shall be interpolated from verifiable field elevations along accessible points. Locations of other pipes shall be taken from information on existing "as-built" drawings or actual field "pothole" datum.

c. When existing "as-built" plans of a water line greater than 12 inches diameter, a high pressure gas line greater than 4 inches diameter, telephone or electrical conduits do not indicate a depth of bury, the Engineer shall coordinate with the utility company for a “pothole" location to be provided.

d. Existing utilities will be identified by name, size, and type of pipe in the profile. If existing or proposed pipes are greater than 21 inches (inside) diameter, show top and bottom invert grade line and indication of pipe wall thickness in profile. For pipes 21 inches or smaller (inside) diameter, indicate only top and bottom invert grade lines in profile.

e. Water relocations as may be necessary shall be per COS Detail No. 2370. Coordinate requirements for shut-off and air release/vacuum valving with the City Water Resources Department.

f. Invert and rim elevations shall be shown on all manholes and pipeline invert elevations shown on all ends of stubouts or at points of match sheet. Pipeline grades shall be established to four decimal places.

g. Invert elevations and lengths of pipe will be calculated from center of manhole to center of manhole. Sections of pipe connected to manholes shall be 5 foot maximum length to minimize the adverse affects of any settlement.

I. Water Line Plan, Profile and Detail Sheets

1. General:

Sheet orientation, topography and notations, horizontal and vertical control, and soils testing shall be similar to those criteria described for the previous section "Sanitary Sewer Plans, Profiles and Details".

2. Profiles and Grades:

a. Profiles are required for all waterlines 12 inches and greater.

a. Profiles shall indicate the existing and design grade line over the pipe and shall include the "as-built", "field-verified", or "potholed" locations of all crossing utilities.

b. Vertical locations of storm drains and sanitary sewers shall be interpolated from verifiable field elevations along accessible points. Locations of other pipes shall be taken from information on existing "as-built" drawings or actual field "pothole" datum.

c. When existing "as-built" plans of a water line, a gas line, telephone or electrical conduits do not indicate a depth of bury, the Engineer shall coordinate with the utility company for a "pothole" location to be provided.

d. Existing utilities will be identified by name, size, and type of pipe in the profile.

e. Existing water line relocations may be necessary and shall be per COS Detail No. 2370. Minimum separations between water lines and electric/gas lines shall be per City of Scottsdale Detail No. 2372.

f. All fire line services and hydrant connections shall be constructed with DIP.

g. Water mains 12 inches in diameter shall have a minimum cover of 48 inches to finish grade; mains smaller than 12 inches diameter shall have a minimum cover of 36 inches to finish grade; mains greater than 12 inches diameter shall have a minimum cover of 60 inches to finish grade. Water mains in industrial areas or in major collectors and arterials shall have a minimum of 48 inches cover.

h. All bends, angle points, fittings shall be stationed. On water lines 12 inches or larger diameter, the design top of pipe elevation shall be shown. Cut stakes shall be provided for the trenching of all water lines 12 inches or more in diameter.

J. Traffic Signal Plan, Schedule and Detail Sheets

1. Sheet Format:

a. Plan Sheets will be orientated same as paving plans and shall follow the format shown in COS design criteria and standards. These sheets will include the same title block as used on the other plan sheets.

b. Signal design will follow the guidelines established in COS design criteria and standards which detail the tasks of the consulting engineer. Traffic signal equipment and construction shall conform to ADOT standard drawings and specifications unless shown otherwise in COS design criteria or the COS Transportation Department Traffic Engineering Division Specifications For Traffic Control Equipment.

2. Plan Sheet:

a. This sheet should be at a scale that permits clear detailing of existing and new signal components, usually 1" = 10'. As-built plans for most of the existing signalized intersections are available from the COS Traffic Engineer's office. The Consultant shall make his own investigation of the intersection to verify all existing conditions.

b. Existing features including all signal poles, control boxes, pull boxes, underground conduit and conductors, detector loops, power source, etc., shall be shown dashed with the proposed new work superimposed thereon. Existing and proposed street configuration shall be taken from the paving plans and the same stationing and offset data used to locate new signal equipment.

c. Locations of poles, traffic signal pullboxes and controller equipment shall be coordinated to remain out of sidewalks to facilitate pedestrian traffic and reflect the ultimate desired position where possible.

d. Pavement markings at the intersection will be shown to coordinate signal lights with traffic lanes. If street construction beyond the intersection is being done by the same project, separate plans for signing and striping will also be prepared as described below in paragraph K.

e. Detector loops shall be stationed to a corner of the loop and will be dimensioned off the new curb or edge of pavement.

3. Notes and Schedules:

Develop these as necessary to show the conductor schedules, controller and pole schedules, phasing details, etc., and general notes with cross references to items shown on the plan sheet. The City has a list of standard notes which will be included on each sheet.

K. Traffic Signing and Pavement Markings

1. Sheet Format:

Use double plan at 1 inch = 40 feet scale, same orientation as the paving plans.

2. Plans:

a. Signing and striping will conform to ADOT Specifications and Standard Drawings and the Manual of Uniform Traffic Control Devices, unless shown otherwise in COS design criteria and standards, or as directed by the Scottsdale Traffic Engineering Program.

b. Existing striping will be shown and dimensioned to a minimum of 300 feet beyond where it ties into the new work. All new work will be appropriately dimensioned from lip of gutter to center of stripe, etc. Overall dimensioning will be provided across pavement widths and rights-of-way. The City has a list of applicable notes which will be placed on the plans.

c. All permanent pavement striping, including crosswalks shall be hot sprayed 6 mil thermoplastic. Temporary pavement markings and island noses shall be reflectorized traffic paint. Legends and Arrows will conform to ADOT Specifications and Standard Drawings.

d. Raised pavement markers are generally required for all new COS paving projects.

L. Landscape and Landscape Irrigation Plans

1. Sheet Format:

Landscaping and irrigation may be combined on the same plan for simpler projects but generally require separate plan sheets. In either case, the orientation and scale will be the same as for paving plans, using a double plan on each sheet.

2. Note and Legends Sheet:

This sheet may be combined for the landscaping and irrigation plans and will contain general notes, landscaping notes, irrigation notes, list of plants and shrubs used (noting common and botanical names), list of irrigation components, legends of landscape and irrigation symbols, quantities, approval block, maintenance statement and miscellaneous details. If the project goes before Development Review, the DR number shall be placed on the right hand lower corner of each sheet.

3. Plan Sheets:

a. Landscape plans will show individual shrubs and trees plus types and areas of various ground cover, including grass, decomposed granite, pavers, exposed aggregate paving, etc., with quantities shown on the right hand column. Identify restoration work behind new sidewalks, or in other areas disturbed by construction work. Existing items to be removed or transplanted will be shown with special attention to native plants that are required to be salvaged. The City will furnish guidance and assistance in identifying plants to be salvaged or transplanted as well as selecting types of new plants that will conform to the City landscaping policy and to the requirements of the Arizona Department of Water Resources for the Phoenix Active Management Area.

b. Sight lines will be shown on the landscaping plans and will conform to COS criteria and standards. Design consideration should be given to placement of plants, size of plant at maturity, canopy widths and general maintenance. Generally, shrubs should be kept a minimum of four feet away from the curb or sidewalk and within a sight line shall not exceed a maturity height of 24 inches above the curb.

c. Trees should be located so that the mature canopy will not overhang the curb or sidewalk line. Within a sight line trees shall have a single trunk with a clear height of 7 feet to the canopy.

d. Irrigation plans will provide detailed design from the service side of the meter. The irrigation service and meter will be provided and noted on the civil plans.

e. Identify, detail and dimension or station the locations and layout of the meter, backflow preventer, control valves, main and lateral lines, pressure regulator, emitters, etc. Diagrammatic

layout plans will not be accepted by the City. The Consultant shall clearly indicate with stations, and dimension to the back of curb or sidewalk the proposed locations of the irrigation components.

f. Separate emitters shall be shown to each plant. Typical planting details shall show an emitter location at each plant. Multi-port emitters will be allowed on each tree with a maximum of four leads of plastic drip tubing thirty-six inches in length.

g. Electrical source will be shown plus controller location and all wiring, including conduits and sleeves. Details for the controller cabinet installation and a schematic of the electric service are shown on COS Standard Detail 2630.

h. The City will provide the Consultant, upon request, a listing of products which may be listed for performance and quality control. The drawings need to reference 'or approved equivalent' in all cases.

M. Bridge and Structural Plans and Details

1. At the City's option, bridges on canals may be designed as a separate contract to be bid separately from the roadway plans since the bridge must be built during the annual canal dry-up. Bridges over washes may be included as part of the paving plans.

2. The sheets required on a typical set of bridge plans which are independent of the roadway plans are as follows:

Sheet No. 1 - City cover sheet with information as shown under paragraph A.

Sheet No. 2 - Typical section sheet to show sections of roadway work included.

Sheet No. 3 - Notes and legend sheet with information shown under paragraph B with additional bridge and structural notes.

Sheet No. 4 - Paving plans and profile sheet with additional information concerning bridge and structural details.

Sheet No. 5 - Detour plan and profile, if required, showing all details required for the detour in plan and profile.

Sheet No. 6 - Plan and profile for any water, sewer, or irrigation alterations to be included as part of the bridge contract.

Sheet No. 7 - Bridge location plan showing the bridge in plan and profile and the bridge quantities.

Sheet No. 8 - Soil boring log sheet showing all soils information obtained and the note concerning responsibility.

Sheet No. 9 - Abutment Details.

Sheet No. 10 - Pier Details.

Sheet No. 11 - Deck Details.

Sheet No. 12 - Miscellaneous details (approach ramps).

Sheet No. 13 - Handrail and Guard Details.

Sheets 7 through 13 described above would be consecutively numbered B1..B_ if incorporated into a roadway project.

3. The Consultant shall discuss the project at an early date with SRP to obtain their requirements when designing a bridge over a canal or when any SRP facilities are involved. Generally, the first phase of a bridge design over a SRP canal shall be to obtain a statement from SRP as to whether they consider the bridge a restriction in the canal. If they do consider it a restriction, it will be necessary for the Engineer to submit a hydraulic study to SRP to assure that construction of the new bridge or bridge widening will not adversely affect hydraulic characteristics in the canal. Upon approval of that study by SRP, the Consultant shall proceed with preparation of preliminary plans. Following review and approval of such plans by the City and SRP, the Consultant shall proceed to drafting final plans. Throughout all stages of project design, the Consultant shall coordinate all work with SRP in order to minimize any possible conflicts. Bridges over SRP canal facilities shall conform to prevailing SRP standards and requirements.

4. Consultant shall consider sight distance requirements when designing the roadway portion of the contract.

5. Consultant shall coordinate with, at an early date, other utilities such as U.S. West, SRP, APS, Southwest Gas, Cable TV, and the COS Water and Wastewater Department and coordinate with them any relocations of their facilities.

N. Plan Sheets by Others

1. General:

a. Private electrical, gas, telephone, cable television facilities may need extension, upgrading or relocation as a result of this project.

b. Where possible, reproducible copies of utility agency designs should be attached to the end of the plans set and labeled for Contractor reference and information only - work to be done by others.

c. There may be situations where the Contractor is required to provide trenching and conduit installation for a utility company. Such work shall be clearly described in the Special Provisions.

O. Right of Way Plans

1. Strip map - Strip maps shall be at a scale (generally 1" = 100') sufficient to differentiate the various easements and parcels. Format should be shown on a 24" x 36" sheet. Each parcel abutting the project shall be shown and shall indicate proposed and existing dimensioned rights-of-ways, easements, ownership, and areas.
a. Format: 24 x 36 per City
b. Scale: 1 inch = 100 feet
c. Property addresses and occupants identified
d. Property owners identified
e. Existing easements and R/W identified
f. New easements and R/W to be acquired identified

2. Parcel exhibits - One per parcel. One exhibit per parcel is required. One exhibit per ownership may be submitted with approval from the COS Right of Way & Design Manager.

Parcel exhibit maps are to be prepared on individual sheets and are to include a legend indicating the type of acquisition. The plan view shall show the parcel boundary dimensioned to section corners (non-subdivided lots), adjacent right-of-way centerline, any onsite improvements along with all existing and proposed easements and rights-of-ways clearly identified and dimensioned. The identification of existing rights-of-way and easements shall include the appropriate county recording information.

a. Format: 8.5 x 11 per City
b. Title block at lower right identifying the City's project, project number, tax parcel no., and owner of the parcel.
c. North arrow and scale
d. 1/4 section ties
e. Property addresses and occupants identified
f. Property owners identified
g. Existing easements and R/W identified
h. New easements and R/W to be acquired identified
i. Individual areas noted
j. Parcels dimensioned and bearings

3. Parcel descriptions - The individual parcel descriptions for all new easements and/or rights-of-way shall be prepared by or under the direct supervision of a land surveyor registered in the State of Arizona and be sealed by the same. All parcel descriptions shall be typed on separate 8-1/2" x 11" formats and shall be consistent with A.P.L.S. standards.

The description shall be typed in single space format and double spaced between its various parts as outlined below:

a. Caption

1. Brief introduction stating location of parcel, portion of a subdivision, aliquot portion of sectional breakdown, township and range.

b. Body

1. Tie true point of beginning to an established section corner, identifying its character

2. Metes and bounds courses

3. Identify boundary lines of joiners, citing Maricopa County Recorders numbers and pages

c. Area of easement or R/W

1. Stated to nearest s.f. and 10,000th ac.

PART B - CITY FACILITIES

1-206 UNIFORM CODES AND DESIGN STANDARDS

A. Standards and Codes

1. Uniform Building Code

2. Uniform Mechanical Code

3. National Electrical Code

4. Uniform Plumbing Code

5. Uniform Fire Code

6. Title 34, Arizona Revised Statutes regulating public buildings and improvements

B. Design policies and guidelines

1. City of Scottsdale Design Standards and Policies Manual

2. City's Development Review Board stipulations

3. Other general acceptable design standards, policies and guides

1-207 GENERAL INFORMATION

A. Plans shall be prepared on standard 'D-sized' (24-inch x 36-inch) sheets unless prior approval is obtained from the City's project manager for the larger 'E-sized' (30-inch x 42-inch) sheets. All sheets shall be clearly reproduced on diazo print paper in blue or black line format.

B. Upon request, the City will furnish the consultant electronic files of base drawings shown in the figures at the end of this section. The consultant shall be responsible for completion of the drawings as applicable for the project.

C. Each sheet shall have a standard City title block in the lower right hand corner. The architect's identification/ logo shall be shown along the right edge or upper right corner of the sheet along with that of any sub-consultant.

D. Minimum lettering size shall be 3/16 inch for manually drafted or 1/8 inch for mechanically produced lettering and must be legible when reduced 50 percent. Reproduction of final drawings must be legible when microfilmed or reduced to 1/2 scale. CPM Plan Review shall determine the legibility of all drawings submitted. Adhesive backed appliques for lettering and shading will not be permitted without approval of CPM Plan Review.

E. On all sheets which have maps or plans, north shall be orientated to the top of the sheet and referenced to actual north. A north arrow and appropriate reference to scale shall be shown on all applicable sheets. Reference Part A for layout and scale representations for sitework sheets.

F. All construction notes shall be keynoted. Group construction keynotes referencing to a specific symbol (square symbols designate demolition and removals, diamond symbols designate relocations and circular shapes for construction items.

G. Each sheet must be sealed prior to final plans approval. Plan review submittals shall be either sealed or clearly marked for City review only. Plans submitted for City Building reviews (generally at the third or 90% submittal) shall be sealed and signed by the registrant or they may be rejected for review.

H. All projects shall comply with Section 404 of the Federal Clean Water Act. Before the city may issue development permits for a project, this form must be completed and submitted with improvement plans to the CPM Design and Plan Review staff. Consultants are advised to apply to the Corps as early as possible for a Section 404 permit and allow for the necessary processing

time to prevent delays in obtaining development permits from the City of Scottsdale. The City of Scottsdale Section 404 Certification Form is included in Chapter 2 of this manual.

1-208 PLAN SHEET NUMBERING AND SEQUENCING

A. Sheets shall be identified by design discipline as designated below and consecutively numbered. Additionally, final consecutive numbering of the entire set of plans shall be provided on each sheet. The following sheet numbering prefixes are commonly used, and the consultant shall review the sheet sequencing and/or intended numbering with the City's project manager:

G=General
C=Civil
L=Landscape
A = Architectural
S=Structural
M=Mechanical
P = Plumbing
E = Electrical

B. Plan sheets shall be sequenced as follows:

Order	Sheet No.	Description
1	G1	City cover sheet
2	G2	Notes, legend and key map sheet
3	C1	Existing site survey
3	C2	Civil grading and drainage plans
4	C_	Civil site utility plans
5	L1	Landscaping and irrigation plans
6	A1	Architectural site plan
7	A2	Architectural plans, elevations, sections, details, schedules
8	S1	Structural gereral notes
9	S2	Structural plans
10	M1	Mechanical legends, notes, abbreviations
11	M2	Mechanical plans, details, schedules
12	P1	Plumbing plans, details and diagrams
13	E1	Electrical legends, notes, abbreviations
14	E2	Electrical site plan
15	E3	Electrical plans, schedules and details

1-209 DETAILED SHEET INFORMATION

A. Cover Sheet
City will furnish an electronic drawing file of the cover sheet upon request (see figure 1.2-1). The Engineer will add the following:

1. Project title, CPM project number, bid call number
2. Vicinity map with section, township and range noted
3. Sheet index
4. Engineering company identification and engineer's seal
5. Other agency approval blocks as applicable
6. City benchmarks for project - two (2) required on NAVD 1988 datum
7. Applicable City assigned project, development review and native plant numbers assigned by

Project Review when submitted.
8. Listing of applicable codes and City ordinance amending/ adopting same

B. Notes, Legend and Key Map Sheets

1. Key Map - Show all intersections, rights-of-way, and key to all plans with stations
2. Legend of symbols used for existing and design elements
3. List of abbreviations used in plan set (other than as shown in the MAG Specifications)
4. Include City of Scottsdale general construction notes for Public works construction (see figure 1.2-14) in addition to any special project notes generated.

C. Plan Submittal Packaging
Projects which consist of sitework and facility work must be packaged in such a way that civil and landscape plans can be separated from the package as a stand alone submittal for review purposes. Consultants shall coordinate this packaging with the CPM Design and Plan Review staff prior to plan submittal.

PART C - CONSTRUCTION BIDDING DOCUMENTS

1-210 GENERAL

The project's scope of work will contain specific requirements for the construction documents to be provided by the consultant.

Generally the consultant provides the following bidding documents to the City of Scottsdale:
- construction plans
- project special provisions
- project schedule of bid items
- construction cost estimate

1-211 CONSTRUCTION DRAWINGS

A. Original drawings submitted to the City will remain property of the City. All drawings shall be on clear 4 mil mylar with original ink, mechanically plotted or photographically reproduced. Ammonia based sepias or electrostatic media will not be accepted by the City. All drawings mechanically plotted shall be of such quality that the plotted medium does not peel or scratch off with reasonable handling. The Consultant shall guarantee the quality of the drawings and shall replace any drawings on which the lettering and/or line work peels, smudges or is otherwise deemed to be unacceptable by the City. Such drawing replacement shall be at no cost to the City.

B The design engineer shall provide to the City electronic files of the construction drawings, special provisions and the schedule of bid items. Drawing formats shall be in MicroStation, latest version. The special provisions and schedule of bid items shall be in Microsoft Word, latest version. Electronic files may be submitted on 3 1/2 inch diskettes or compact disk.

1-212 SPECIAL PROVISIONS/ TECHNICAL SPECIFICATIONS

"Invitation To Bid" documents follow a specific format for all Capital Improvement projects. They include City drafted boiler plates consisting of the notice inviting bids, information for bidders, general conditions, bid forms, contracts, bonding and insurance forms, etc.. The project special provisions will supplement the City boiler general conditions.

The City will provide the consultant, upon request, a sample format of the project special provisions including a compilation of guideline special provisions. The consultant shall thoroughly review the guideline special provisions and determine which portions are applicable for their specific project and determine the need for supplementation.

The special provisions are updated as needed so the consultant should request a current version for each Capital Project design.

1-213 BID SCHEDULE

The consultant will complete a standard schedule of bid items consistent with the City's required format (see Figure 1.2-13).

Bid item numbers shall be taken from a master list of items which is available from CPM Plan Review. Project specific item numbers not listed shall be coordinated with CPM Plan Review.

The master bid item list is frequently updated so the consultant shall request a current version for each design project.

1-214 CONSTRUCTION COST ESTIMATE

The engineer/ architect shall provide the City with a final detailed estimate of the probable cost of construction.

CITY OF SCOTTSDALE

PUBLIC IMPROVEMENTS

COUNCIL

HERB DRINKWATER (Mayor)
GREG BIELLI
SUSAN BITTER SMITH
SAM KATHRYN CAMPANA
ROSS DEAN
BILL SODERQUIST
WILLIAM N. WALTON

CITY MANAGER

JORGE CARRASCO

CITY ATTORNEY

RICHARD W. GARNETT III

CITY CLERK

MARK G. MAZZIE

"AS-BUILT" CERTIFICATION

I HEREBY CERTIFY THAT THE "AS-BUILT" IMPROVEMENTS AS SHOWN HEREON ARE LOCATED AS NOTED, AND THE LOCATIONS ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR _____ DATE _____

CITY OF SCOTTSDALE

REVIEWED AND RECOMMENDED APPROVAL BY:

FIRE DEPT.		CIVIL	
WATER & SEWER		PLANNING	

APPROVED BY:

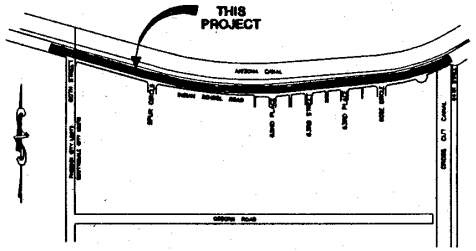
PROJECT REVIEW MANAGER _____ DATE _____

ENGINEER

263-1100

INDIAN SCHOOL ROAD WIDENING
60TH STREET TO 64TH STREET

PROJECT NO. S 0705
BID CALL 91-01



Vicinity Map
N.T.S.

Sheet Index

Sht. No.	Description
1	COVER SHEET
2	TYPICAL SECTIONS, DETAILS
3-9	PLAN & PROFILE SHEETS

BENCH MARKS

1 - B.C. In H.H. At Station 5+18.36
Elevation = 1268.00 (C.O.S. Datum)

2 - "□" On West Return At SW Corner Of Rose Circle Dr. & Indian School Rd.
Elevation = 1268.26 (C.O.S. Datum)

P-098-1

INDIAN SCHOOL RD. WIDENING - 60TH ST. TO 64TH ST.
PROJECT NO. S 0705 BID CALL 91-01
100 E 91 65 DR 90

Figure 1.2-1
Typical Cover Sheet Information

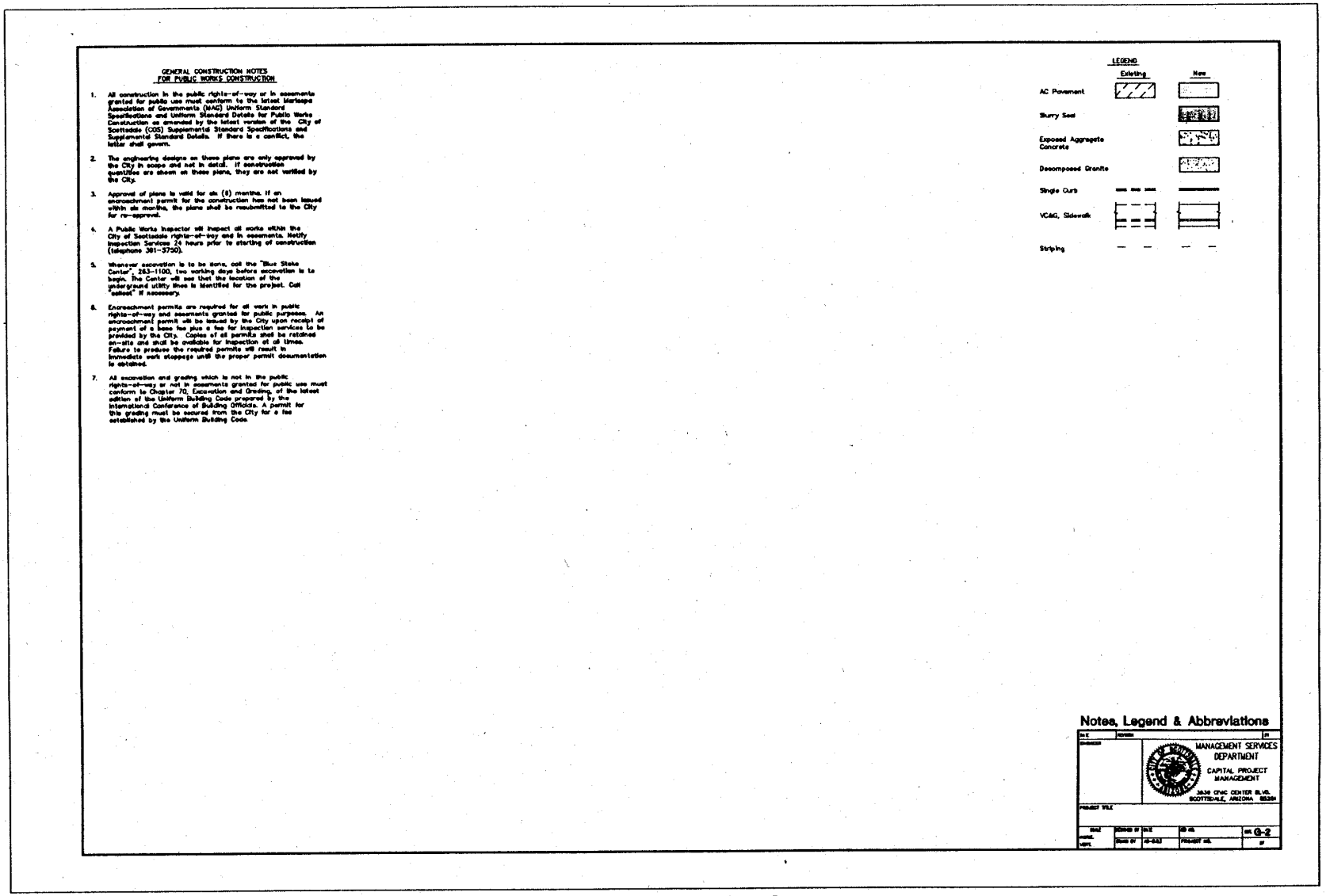
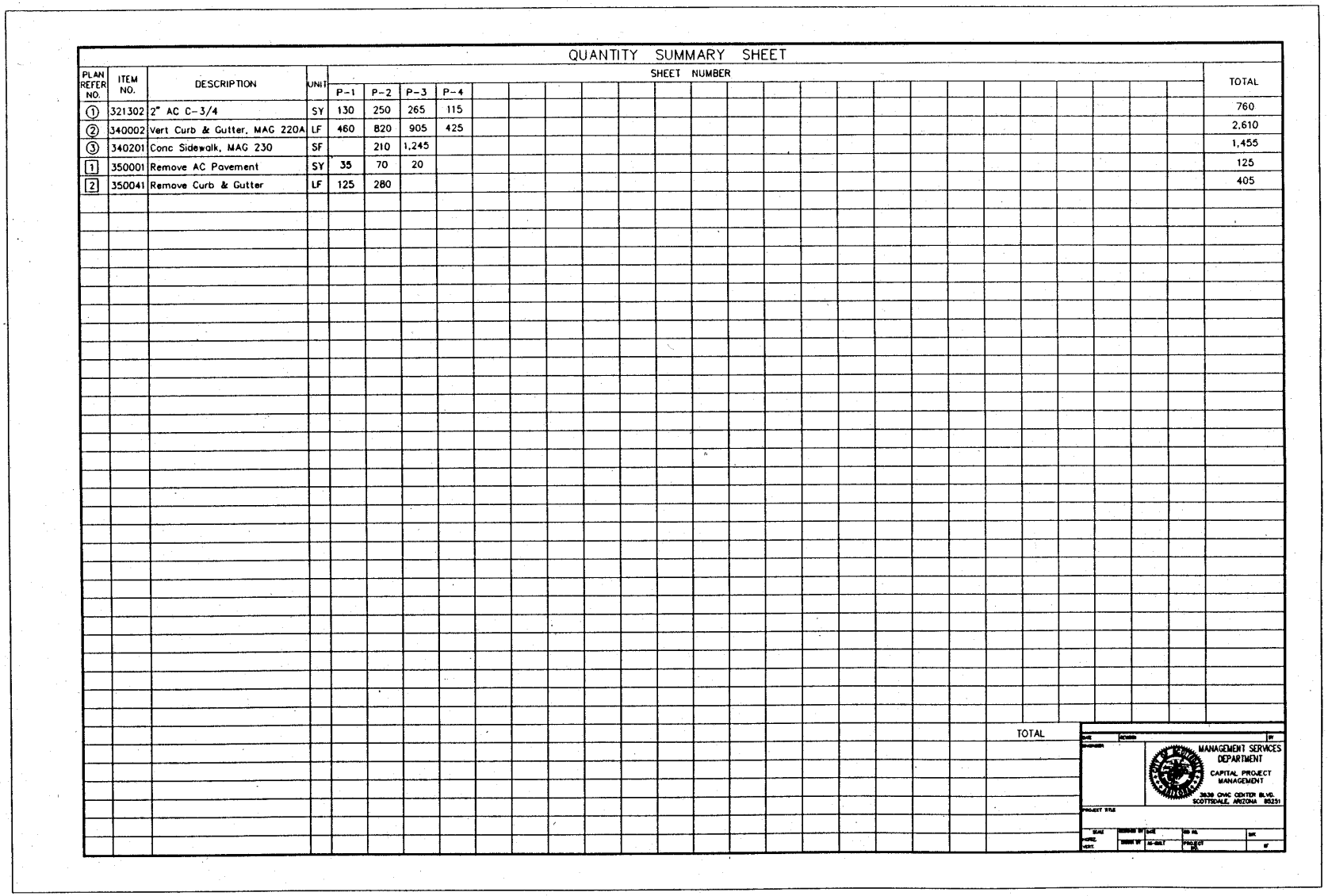


Figure 1.2-2
Sample Plan Sheet



QUANTITY SUMMARY SHEET

PLAN REFER NO.	ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBER P-1	P-2	P-3	P-4	TOTAL
①	321302	2" AC C-3/4	SY	130	250	265	115	760
②	340002	Vert Curb & Gutter, MAG 220A	LF	460	820	905	425	2,610
③	340201	Conc Sidewalk, MAG 230	SF		210	1,245		1,455
1	350001	Remove AC Pavement	SY	35	70	20		125
2	350041	Remove Curb & Gutter	LF	125	280			405

TOTAL

MANAGEMENT SERVICES DEPARTMENT
CAPITAL PROJECT MANAGEMENT
3939 CIVIC CENTER BLVD.
SCOTTSDALE, ARIZONA 85251

Figure 1.2-3
Sample Quantity Summary Sheet

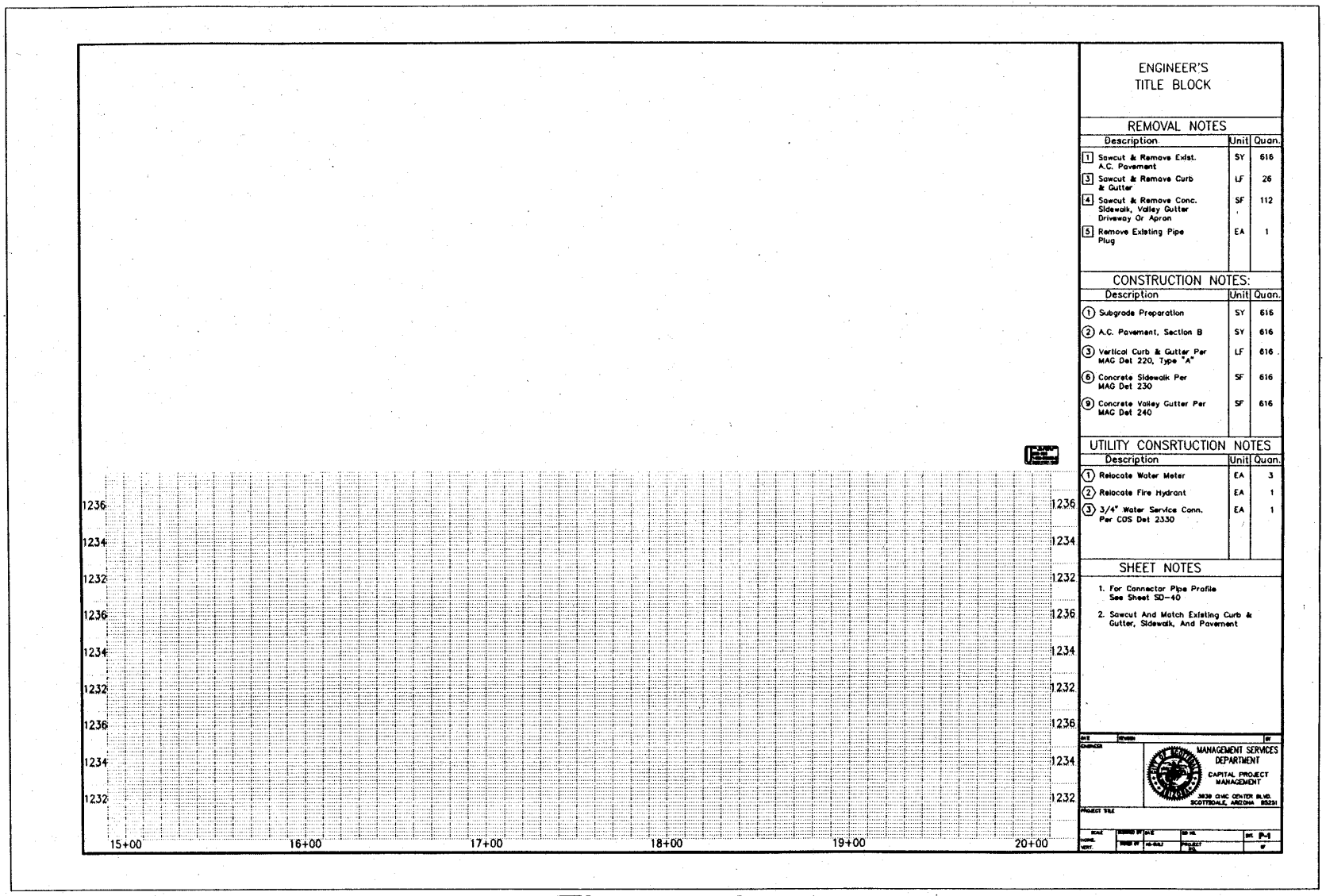


Figure 1.2-4

Sample Paving (n & Profile Sheet

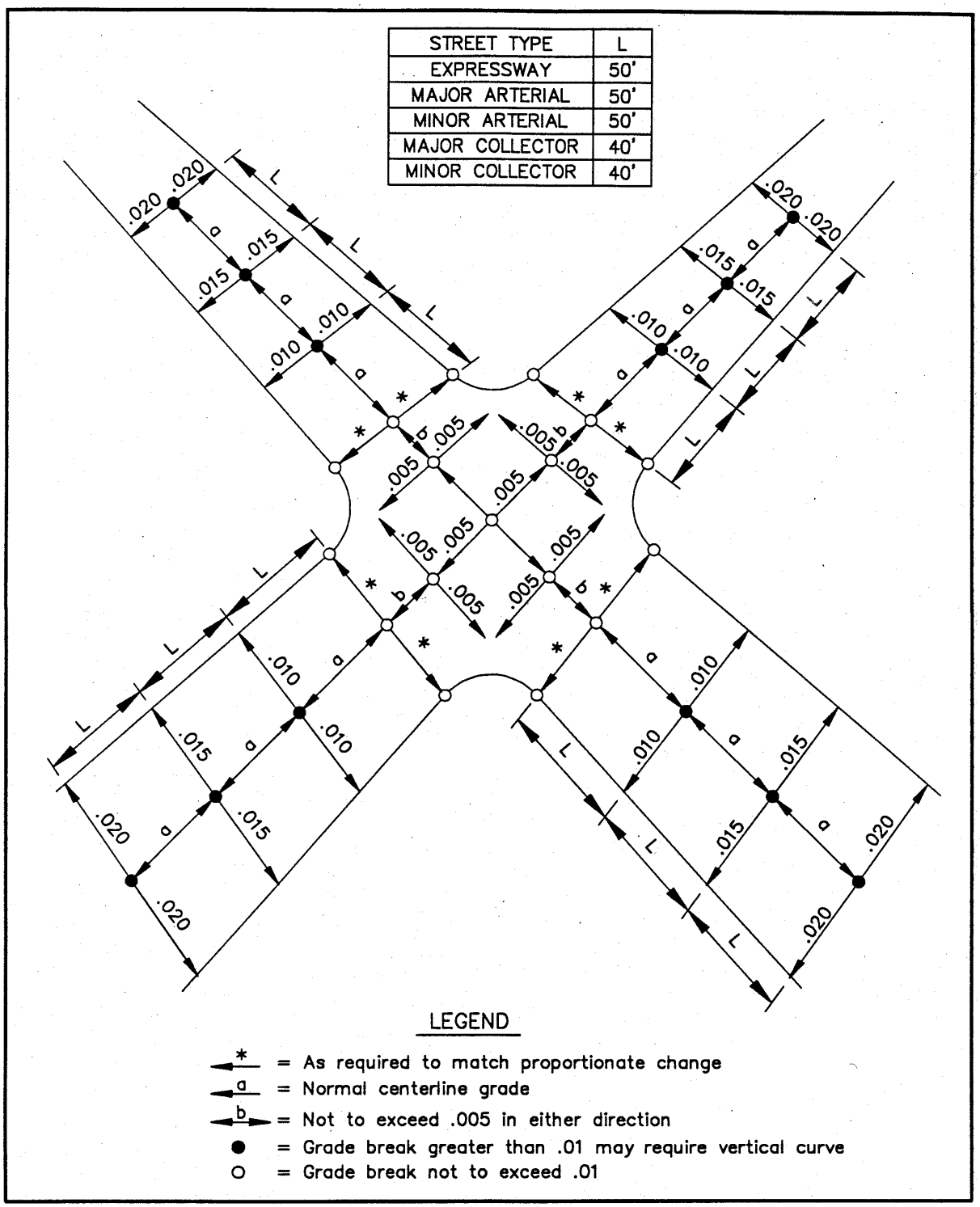


Figure 1.2-5

Guidelines For Intersection
Cross-slopes & Crown Run-off

PROJECT NO. _____ DATE _____

PROJECT NAME _____

INTERSECTION _____ BY _____

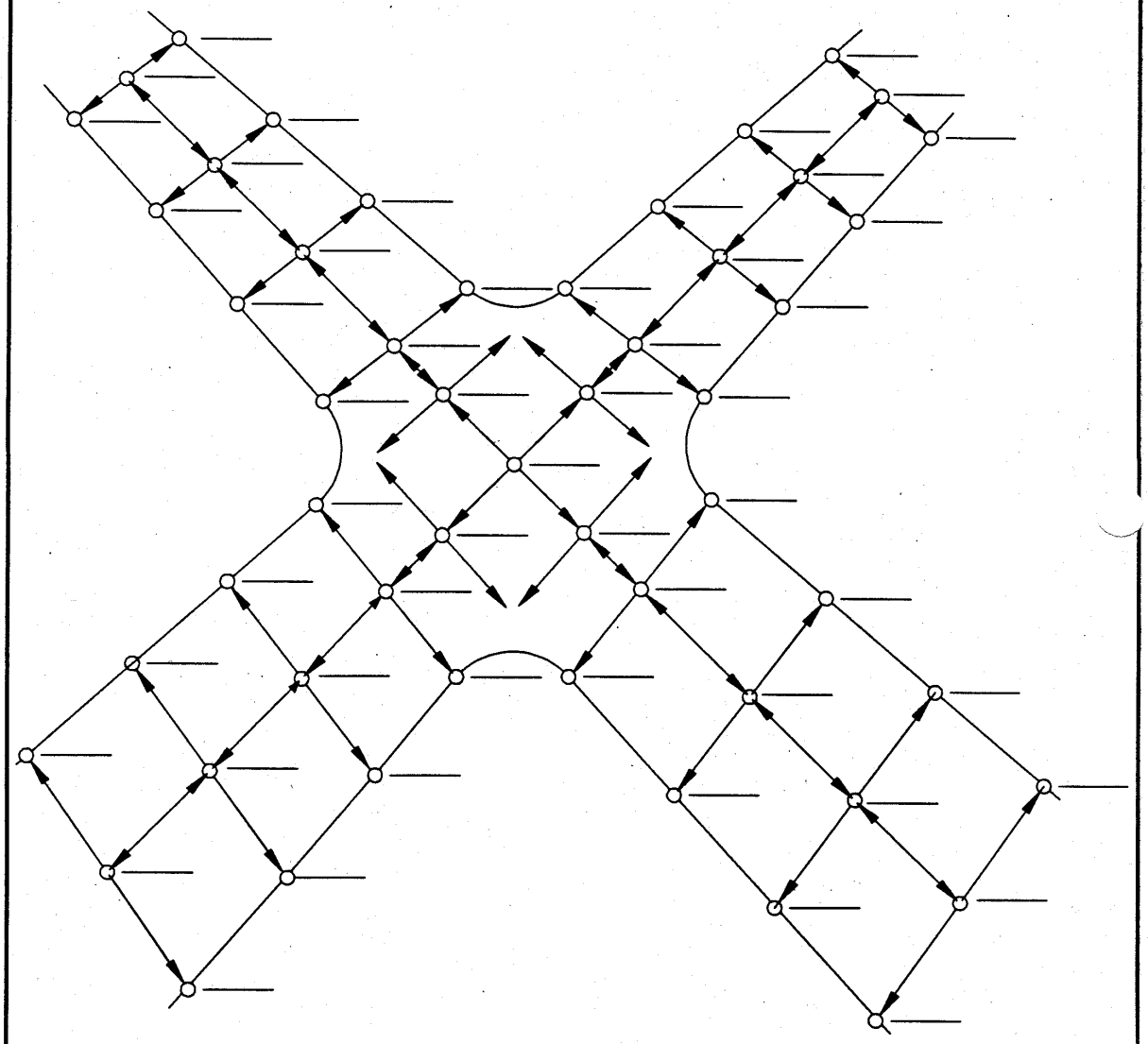
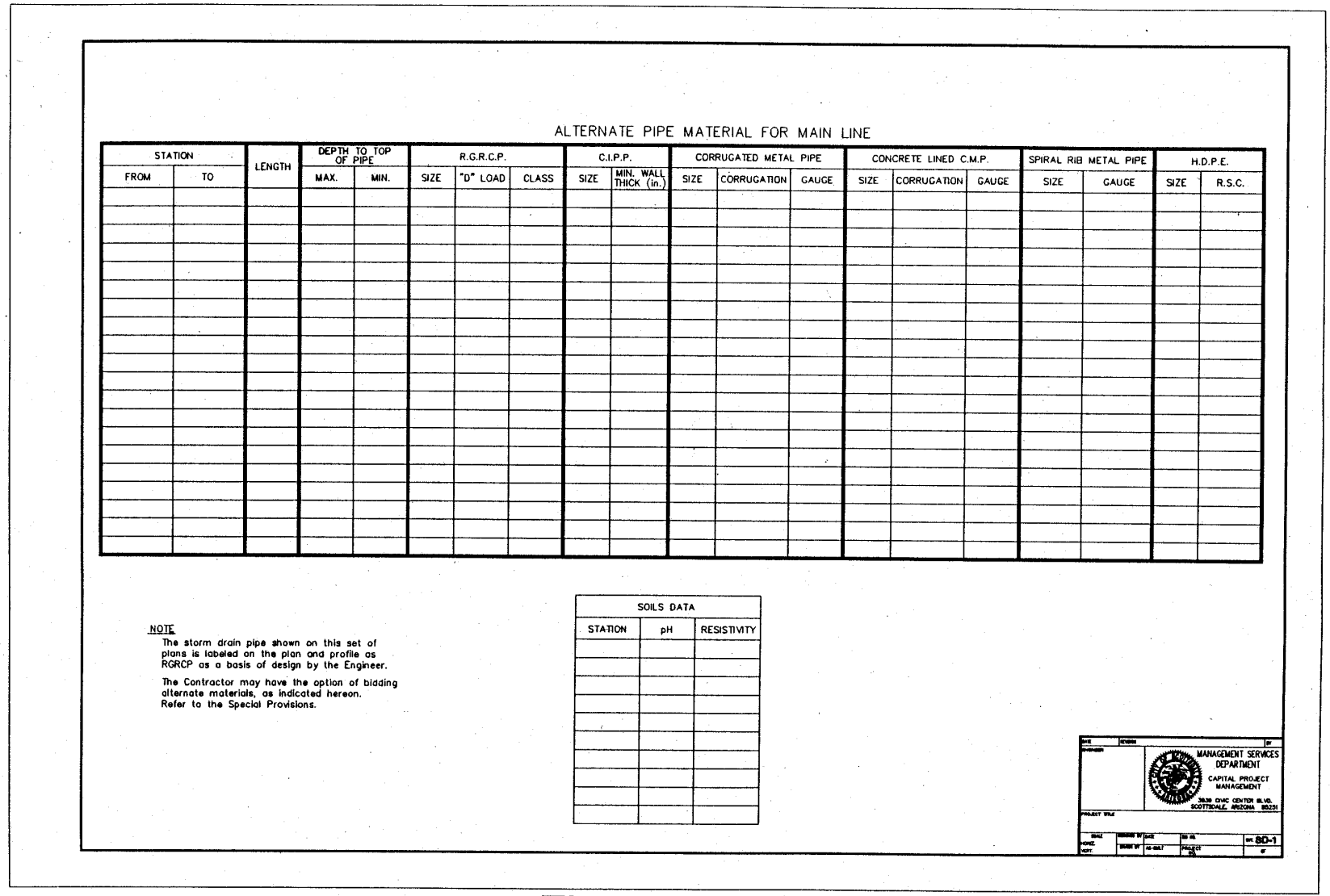


Figure 1.2-6

Worksheet For Intersection
Cross-slopes & Crown Run-off



ALTERNATE PIPE MATERIAL FOR MAIN LINE

STATION		LENGTH	DEPTH TO TOP OF PIPE		R.G.R.C.P.			C.I.P.P.		CORRUGATED METAL PIPE			CONCRETE LINED C.M.P.			SPIRAL RIB METAL PIPE		H.D.P.E.	
FROM	TO		MAX.	MIN.	SIZE	"D" LOAD	CLASS	SIZE	MIN. WALL THICK (in.)	SIZE	CORRUGATION	GAUGE	SIZE	CORRUGATION	GAUGE	SIZE	GAUGE	SIZE	R.S.C.

NOTE

The storm drain pipe shown on this set of plans is labeled on the plan and profile as RGRCP as a basis of design by the Engineer.

The Contractor may have the option of bidding alternate materials, as indicated hereon. Refer to the Special Provisions.

SOILS DATA		
STATION	pH	RESISTIVITY

MANAGEMENT SERVICES DEPARTMENT
CAPITAL PROJECT MANAGEMENT
3939 CIVIC CENTER BLVD.
SCOTTSDALE, ARIZONA 85251

SD-1

Figure 1.2-7
Sample Pipe Summary Sheet

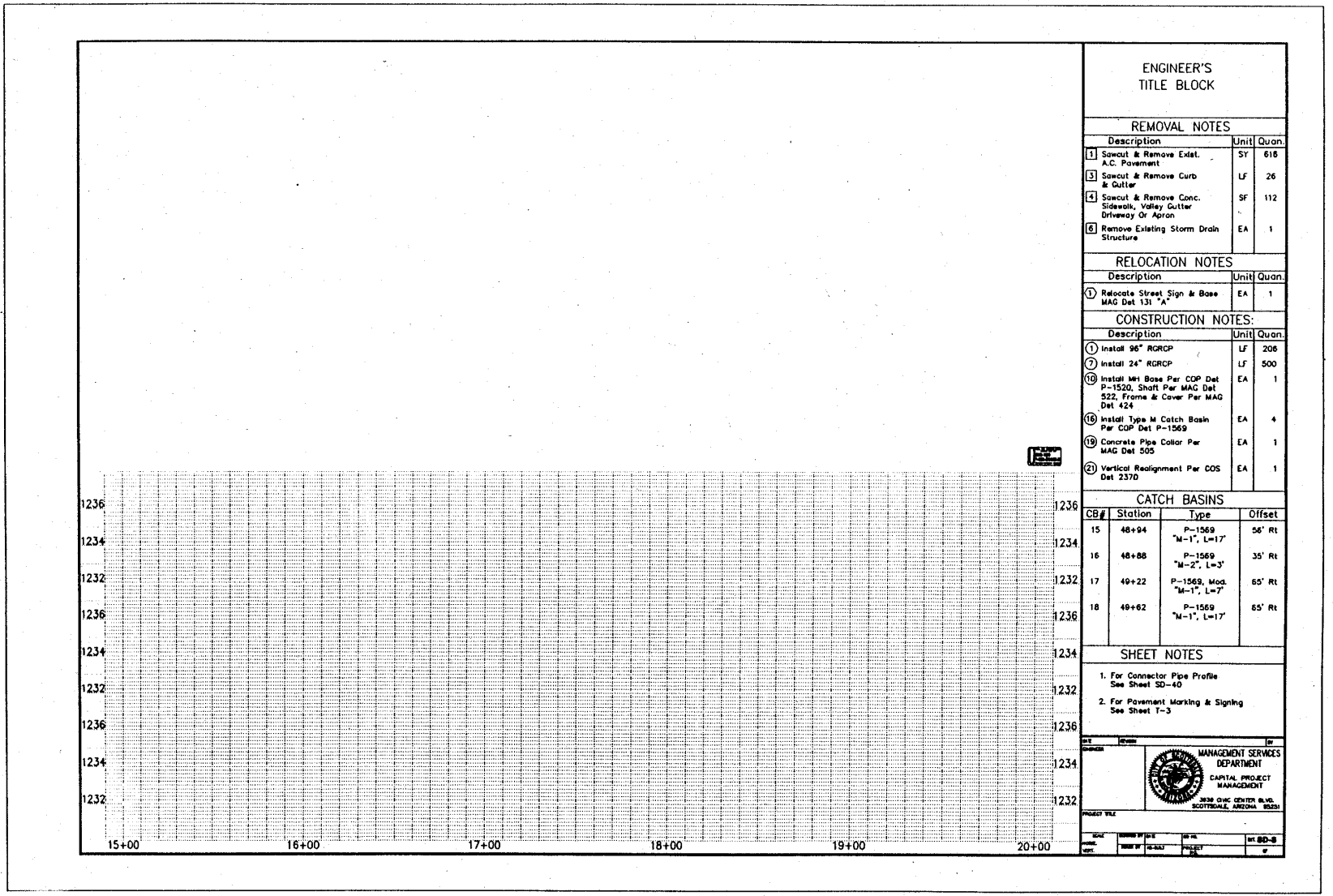


Figure 1.2-8

Sample Storm Drain Plan & Profile Sheet

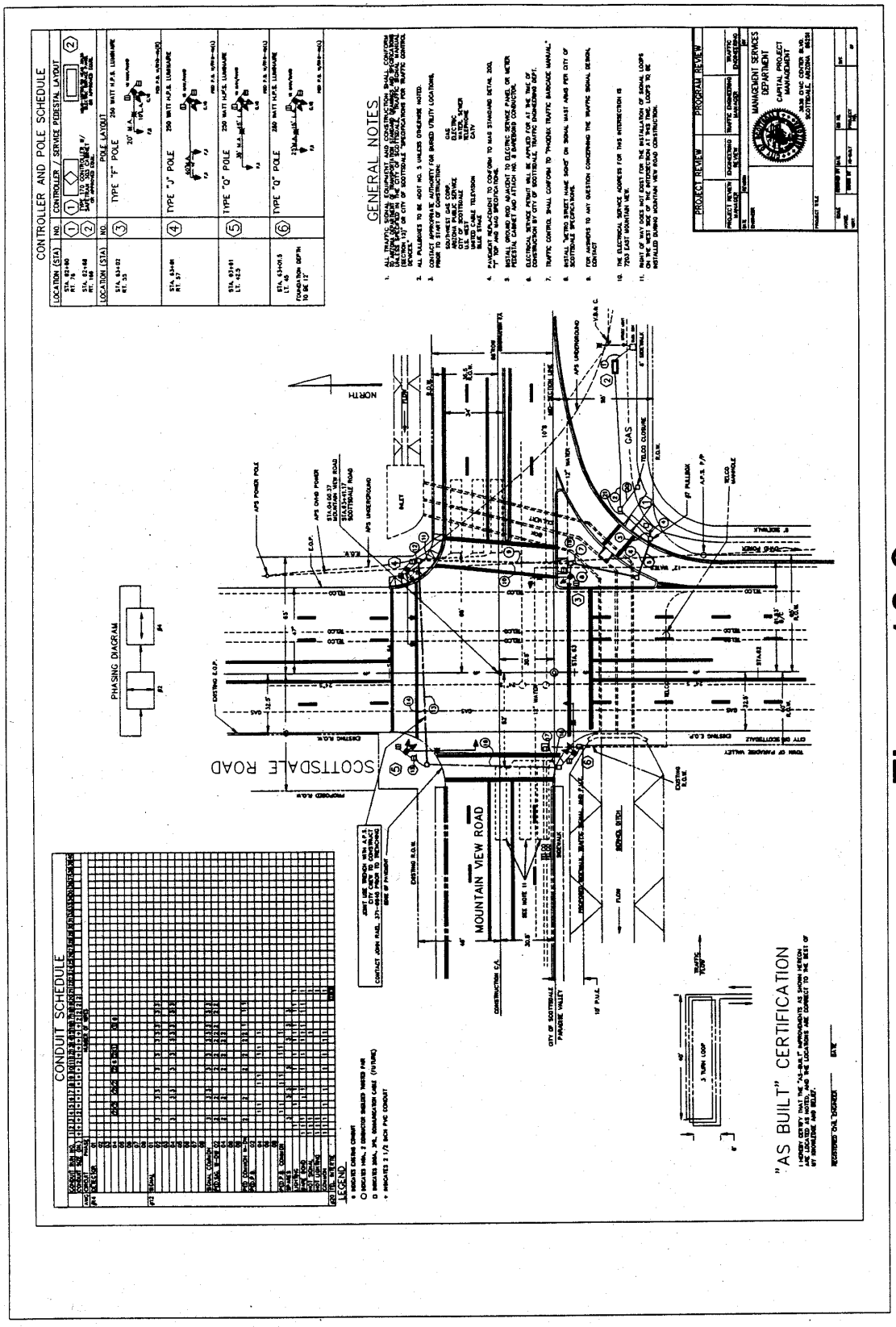


Figure 1.2-9

Sample Intersection Signal Plan

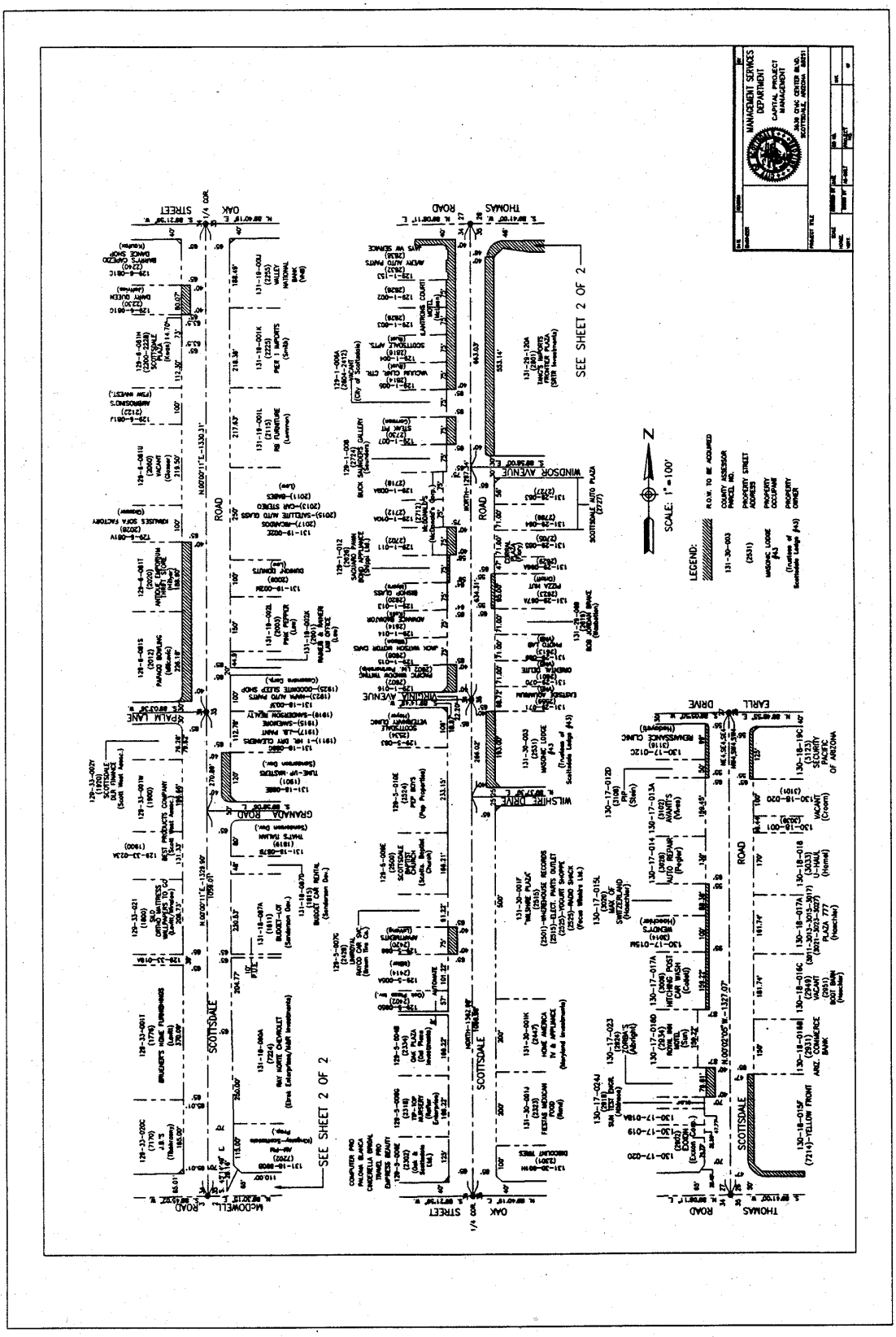


Figure 1.2-10
Sample Right-of-Way Exhibit

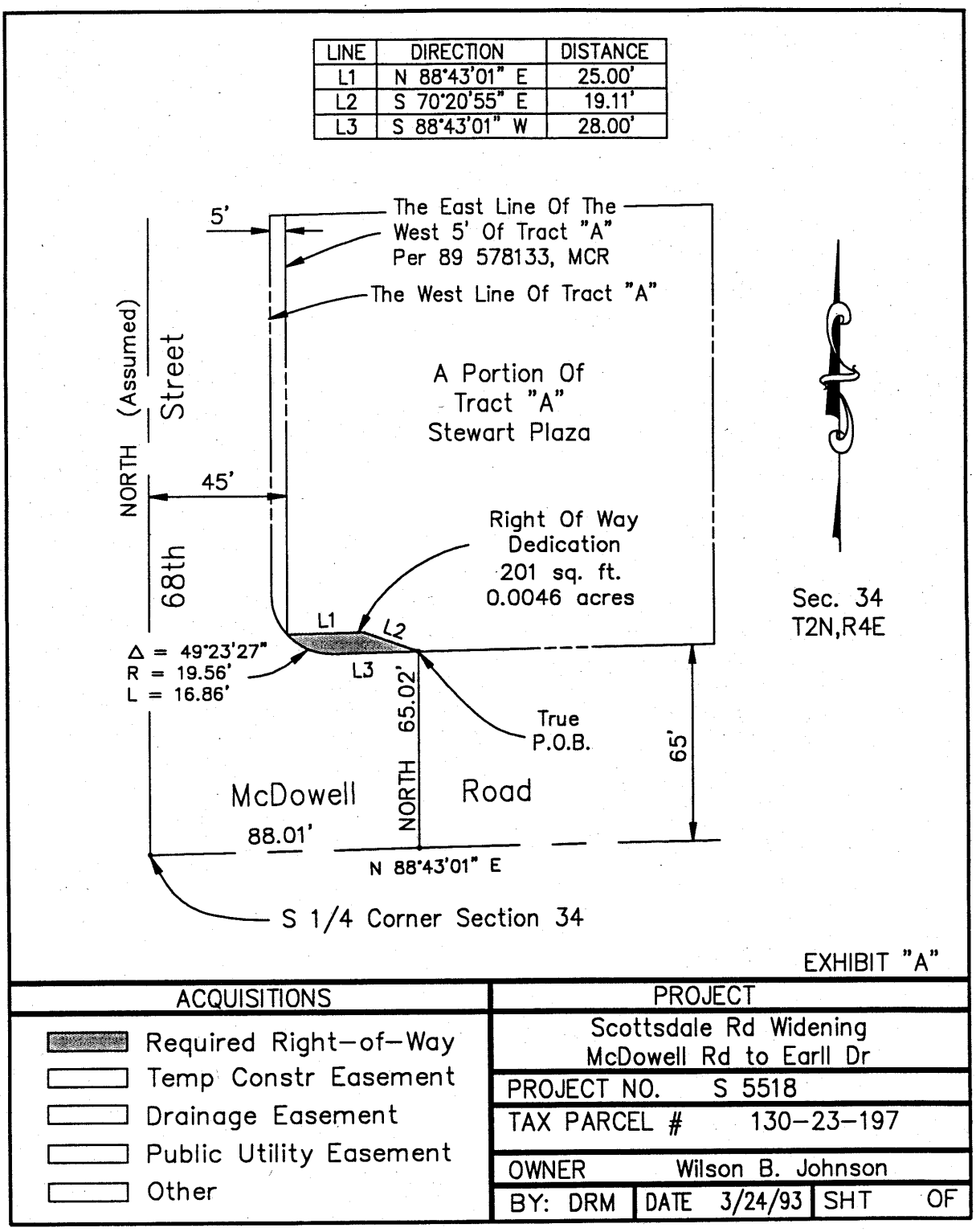


Figure 1.2-11

Sample Parcel Acquistion Exhibit

Project:	Project Name
Project No:	XXXX
Tax Parcel No:	XXX-XX-XXX
Owner:	Owner's Name

RIGHT-OF-WAY DESCRIPTION

A parcel of land located in Tract "A" of Stewart Plaza, a subdivision recorded in Book 71, Page 24, Maricopa County Records, and situated int he Southesast Quarter of Section34, Twonship Tw(2) North, Range Four (4) East of Gila and Salt River Base and Meridian Maricopa County, Arizona. Soad parcel bing more particulary described as follows:

Commencing at the South Quarter Corner of said Section 34,thence North 88°43'01" East along the South line of said Section a distane of 88.01 feet; thene North a distance of 65.02 feet to a point on the South line of said Tract "A", said point also being the TRUE POINT OF BEGINNING.

Thence South 88°43'01" West a distance of 28.00 feet along the south line of said Tract "A" to the beginning of a trangent curve to the right, concave Notheasterly with a radius of 1956 feet; thence Northwesterely along the arc of said curve through a central angle of 49°23'27" a distance of 16.86 feet to a pointon the east line of the West 5 feet of said Tract "A: as described in document 89-588133, Maricopa County Recordds' thece North 88°43'01" East parallel to the South line of Tract "A" a distance of 25.55 feet; thence South 70°20'55" East a distance of 19.11 feet to the TRUEPOINT OF BEGINNING.

Said parcel containing an area of 201 square feet (.0046 acres) ±.

Figure 1.2-12
Sample Legal Description Exhibit

Project Number: _____ Bid page: _____
Bid Call Number: _____ Sheet: _____
Of: _____

Project name
Schedule of Bid Items

Item No.	Item Description	Estimated Quantities	Unit	Unit Price	Total Amount

FIGURE 1.2-13
Sample Schedule of Bid Items Form

Project Number: _____ Bid page: _____
Bid Call Number: _____ Sheet: _____
Of: _____

Project name
Schedule of Bid Items

Item No.	Item Description	Estimated Quantities	Unit	Unit Price	Total Amount

Total Bid _____ Dollars
(in writing)
_____ Cents
$ _____

Contractor's
Name: _____

FIGURE 1.2-13a
Sample Schedule of Bid Items Form

GENERAL CONSTRUCTION NOTES FOR CAPITAL IMPROVEMENT PROJECTS

1. All construction shall comply with the latest Maricopa County Association of Governments Standard Specifications and Details for Public Works Construction as amended by the latest version of the City of Scottsdale Supplemental Standard Specifications and Details, unless referenced otherwise on the drawings.

2. The engineering designs on these plans is approved by the City in scope and not on detail. If construction quantities are shown on these plans they are not verified by the City.

3. Approval of the plans by the City is valid for six (6) months. If an encroachment permit for the construction has not been issued within six months, the plans shall be resubmitted to the City for re-approval.

4. A City Capital Projects Inspector will inspect all work within the City right-of -way and in easements.

5. Wherever excavation is done contact the Blue Stake Center at 263-1100, two working days before excavation is to begin. The Center will see that the location of the underground utility lines is identified for the project. Call collect if necessary.

6. City encroachment permits are required for all work in public right-of-way and easements granted for public purposes. An encroachment permit will be issued by the City through the City's One-Stop Shop. Copies of all permits shall be retained on-site and shall be available for inspection at all times. Failure to produce the required permits will result in immediate work stoppage until the proper permit documentation is obtained.

7. All excavation and grading which is not in public right-of-way or in easements granted for public purposes must conform to Chapter 70, Excavation and Grading, of the latest edition of the Uniform Building Code prepared by the International Conference of Building Officials. A permit for this grading must be secured from the City.

8. Thrust restraint, where required, on all City water lines shall be provided using Megalug mechanical joint restraints or City approved equal.

FIGURE 1.2-14
General Construction Notes for Capital Improvement Projects

APPENDIX A - BID ITEMS NUMBERING FORMAT

CITY OF SCOTTSDALE - CAPITAL PROJECT MANAGEMENT
MASTER LIST OF BID ITEMS
UPDATE: APRIL 1998

ITEM NO.	DESCRIPTION	UM
104150	PROJECT SIGNS (NEW)	EA
104250	PROJECT HOTLINE	LS
105801	CONSTRUCTION SURVEYING & AS-BUILTS	LS
107001	PERMITS & FEES	LS
201001	CLEARING & GRUBBING	SY
201101	REMOVE BUSINESS SIGNS	EA
205001	ROADWAY EXCAVATION	CY
206001	STRUCTURAL EXCAVATION	CY
206101	STRUCTURAL BACKFILL	CY
210001	BORROW	CY
211001	FILL	CY
215001	CHANNEL/DRAINAGE EXCAVATION	CY
215101	GRADER DITCH	LF
220401	PLAIN RIPRAP	CY
220402	PLAIN RIPRAP (SPECIFY THICKNESS)	SY
220501	GROUTED RIPRAP	CY
220502	GROUTED RIPRAP (SPECIFY THICKNESS)	SY
220551	SEEDED RIPRAP (6' DEPTH)	SY
220601	CONCRETE RIPRAP	CY
220602	CONCRETE RIPRAP (SPECIFY THICKNESS)	SY
220701	WIRE GABIONS	CY
301201	SUBGRADE PREPARATION	SY
301501	GRADING OUTSIDE ROADWAY	SY
310104	4" ABC	SY
310106	6" ABC	SY
310108	8" ABC	SY
310110	10" ABC	SY
310112	12" ABC	SY
310114	14" ABC	SY
310204	6" SELECT FILL	SY
310208	8" SELECT FILL	SY
310210	10" SELECT FILL	SY
310212	12" SELECT FILL	SY
310214	14" SELECT FILL	SY
311006	SOIL CEMENT BASE COURSE	CY
312006	6" CEMENT TREATED BASE	SY
312008	8" CEMENT TREATED BASE	SY
312010	10" CEMENT TREATED BASE	SY
312012	12" CEMENT TREATED BASE	SY
312014	14" CEMENT TREATED BASE	SY
321001	PAVEMENT SECTION NO. 1 (FOR BIDDING)	SY
321002	PAVEMENT SECTION NO. 2 (FOR BIDDING)	SY
321003	PAVEMENT SECTION NO. 3 (FOR BIDDING)	SY
321010	THICKENED PAVEMENT EDGE, MAG 201-A	LF
321011	THICKENED PAVEMENT EDGE, MAG 201-B	LF
321102	2" AC A-1 1/2 OR R-25	SY
321104	4" AC A-1 1/2 OR R-25	SY
321106	6" AC A-1 1/2 OR R-25	SY
321201	1 1/2" AC C-3/4 OR R-19	SY
321202	2" AC C-3/4 OR R-19	SY
321203	2 1/2" AC C-3/4 OR R-19	SY
321204	3" AC C-3/4 OR R-19	SY
321205	4" AC C-3/4 OR R-19	SY
321301	1" AC D-1/2 OR R-12.5	SY
321302	1 1/2" AC D-1/2 OR R-12.5	SY

321303	2" AC D-1/2 OR R-12.5	SY
321401	1" RUBBERIZED ASPHALT	SY
321501	1" RECYCLED ASPHALT PAVEMENT	SY
321502	1 1/2" RECYCLED ASPHALT PAVEMENT	SY
321503	2" RECYCLED ASPHALT PAVEMENT	SY
321601	1" AC A-12.5	SY
321602	1 1/2" AC A-12.5	SY
321603	2" AC A-12.5	SY
321701	1 1/2" A-19	SY
321702	2" AC A-19	SY
321703	2 1/2 " A-19	SY
321704	3" AC A-19	SY
321801	2" AC A-25	SY
321802	2 1/2" AC A-25	SY
321803	3" AC A-25	SY
321901	SPEED BUMPS	EA
321902	SPEED HUMPS	EA
322001	1" D-1/2 OVERLAY	SY
322002	1" C-3/4 OVERLAY	SY
322003	1 1/2" C-3/4 OVERLAY	SY
322004	2" C-3/4 OVERLAY	SY
324104	4" PCC PAVEMENT	SY
324106	6" PCC PAVEMENT	SY
324108	8" PCC PAVEMENT	SY
324201	BUS BAY, COS 2266-1	EA
324202	BUS BAY, COS 2266-2	EA
324203	BUS BAY, COS 2267	EA
324301	BUS SHELTER PAD, COS 2269	EA
324302	BUS SHELTER, COS STANDARD	EA
329101	TACK COAT	SY
330101	CHIP SEAL	SY
332201	SLURRY SEAL- TYPE I	SY
332202	SLURRY SEAL- TYPE II	SY
334201	PRESERVATIVE SEAL	SY
335201	HOT-ASPHALT RUBBER SEAL	SY
336001	SAWCUT PAVEMENT	LF
336301	PAVEMENT REPLACEMENT, COS 2200	SY
340001	VERT CURB & GUTTER, MAG 220 TYPE "A"	LF
340002	VERTICAL CURB & GUTTER, COS 2220 TYPE "A"	LF
340004	CURBWALL, COS 2221 TYPE "W"	LF
340021	RIBBON CURB, MAG 220 TYPE "B"	LF
340022	VERTICAL CURB & GUTTER, COS 2220 TYPE "B"	LF
340041	ROLL CURB & GUTTER, MAG 220 TYPE "C"	LF
340042	ROLL CURB & GUTTER, MAG 220 TYPE "D"	LF
340061	SINGLE CURB, MAG 222 TYPE "A"	LF
340062	SINGLE CURB, MAG 222 TYPE "B"	LF
340081	6" EXTRUDED CONCRETE CURB	LF
340101	6" EXTRUDED ASPHALT CURB	LF
340121	CUT-OFF WALL, COS 2228	LF
340204	4" CONCRETE SIDEWALK, MAG 230	SF
340206	6" CONCRETE SIDEWALK, MAG 230	SF
340214	10' WIDE CONCRETE BIKEPATH (4IN THICKNESS)	SF
340216	10' WIDE CONCRETE BIKEPATH (6IN THICKNESS)	SF
340221	MEDIAN NOSE PAVING	SF
340241	TEXTURED CONCRETE SIDEWALK	SF
340242	STAMPED CONCRETE SIDEWALK	SF
340261	SIDEWALK RAMP, MAG 231 TYPE "A"	EA
340262	SIDEWALK RAMP, MAG 232 TYPE "B"	EA
340263	SIDEWALK RAMP, MAG 233 TYPE "C"	EA
340264	SIDEWALK RAMP, MAG 234 TYPE "D"	EA
340301	CONCRETE VALLEY GUTTER, MAG 240	SF
340302	CONCRETE VALLEY GUTTER, COS 2240	SF
340406	DRIVEWAY ENTRANCE, MAG 250, DEPTH=6"	SF
340407	DRIVEWAY ENTRANCE, MAG 250, DEPTH=7"	SF
340508	ALLEY ENTRANCE, MAG 260 (8")	SF

340601	SCUPPER, MAG 206--DESIGNATE LENGTH--	EA
342001	INTERLOCKING CONCRETE PAVERS-TRAFFIC	SF
342002	INTERLOCKING CONCRETE PAVERS-NON-TRAFFIC	SF
342051	BRICK PAVERS (TRAFFIC AREA)	SF
342052	BRICK PAVERS (NON-TRAFFIC AREA)	SF
342061	PAVER CONC HEADER (TRAFFIC AREA)	LF
342062	PAVER CONC HEADER (NON-TRAFFIC AREA)	LF
342082	TEXTURED CONCRETE-TRAFFIC AREA	SF
343001	EXPOSED AGGREGATE SIDEWALK	SF
343002	EXPOSED AGGREGATE (DECORATIVE)	SF
345001	ADJUST MANHOLE FRAME & COVER, COS 2270	EA
345101	ADJUST VALVE BOX & COVER, COS 2270	EA
345201	ADJUST METER BOX	EA
350001	REMOVE AC PAVEMENT	SY
350011	ROTOMILL AC PAVEMENT (PER 1" DEPTH)	SY
350016	ROTOMILL PAVEMENT (1 1/2")	SY
350017	ROTOMILL PAVEMENT (2")	SY
350021	REMOVE CONCRETE PAVEMENT	SY
350041	REMOVE CURB & CUTTER	LF
350051	SAWCUT CURB FROM GUTTER	LF
350061	REMOVE CONCRETE SIDEWALK	SF
350081	REMOVE CONCRETE DRIVEWAY	SF
350101	REMOVE CONCRETE VALLEY GUTTER	SF
350201	REMOVE PIPES (LESS THAN 24")	LF
350221	REMOVE PIPES (24" TO 48")	LF
350241	REMOVE PIPES (54" TO 96")	LF
350261	REMOVE PIPES (GREATER THAN 96")	LF
350301	REMOVE IRRIGATION STRUCTURE	EA
350321	REMOVE GROUTED RIPRAP/GUNITE	SY
350341	REMOVE STORM DRAIN STRUCTURE	EA
350401	REMOVE IRRIGATION HEADWALL	EA
350441	REMOVE STORM DRAIN HEADWALL	EA
350501	REMOVE TREES (12" TO 24")	EA
350541	REMOVE TREES (GREATER THAN 24")	EA
350601	REMOVE TRAFFIC MARKINGS, SANDBLAST	LF
350602	REMOVE TRAFFIC MARKINGS, SHOTBLAST	LF
350603	REMOVE TRAFFIC MARKINGS, SLURRY	LF
350701	REMOVE UNDERGROUND STORAGE TANKS	LS
350702	REMOVE CONTAMINATED SOIL	CY
350801	MISC. REMOVALS AND OTHER WORK	LS
350901	REMOVE AND RELOCATE BRICK PAVERS	SF
350902	REMOVE AND RELOCATE CHAIN LINK FENCING	LF
350902	MISCELLANEOUS RELOCATIONS	LS
401001	TRAFFIC CONTROL	LS
401101	OFF-DUTY POLICE OFFICER	HR
401201	PROJECT HOT-LINE	LS
402001	LANE STRIPING (FOR ESTIMATING)	LS
402101	4" WHITE STRIPE (60MIL THERMO PLASTIC)	LF
402102	4" YELLOW STRIPE (60MIL THERMO PLASTIC)	LF
402104	4" WHITE STRIPE (90MIL THERMO PLASTIC)	LF
402111	4" WHITE STRIPE (PAINT)	LF
402112	4" YELLOW STRIPE (PAINT)	LF
402121	PAVEMENT LEGEND- ONLY (TYPE I PREFORM)	EA
402122	PAVEMENT ARROW (TYPE I PREFORM)	EA
402126	BIKE LANE DIAMOND	EA
402127	BIKE LANE ARROW	EA
402128	BIKE LANE SYMBOL	EA
402131	PAVEMENT LEGEND- ONLY (PAINT)	EA
402132	PAVEMENT ARROW (PAINT)	EA
402136	PAINT MEDIAN NOSE	LF
402141	RAISED PAVEMENT MARKERS, TYPE "D"	EA
402142	RAISED PAVEMENT MARKERS, TYPE "G"	EA
402143	RAISED PAVEMENT MARKERS, TYPE "H"	EA
402144	RAISED PAVEMENT MARKERS, TYPE "M"	EA
402145	RAISED PAVEMENT MARKERS, DAGMARS (8")	EA

402150	FLEXIBLE MARKERS	EA
402301	METRO STREET SIGN	SF
402401	REFLECTIVE SIGNS	SF
402411	TELESPAR SIGN POST	LF
402412	TELESPAR SIGN POST BASE	EA
402421	SIGN BANDS (FOR POLES)	EA
402611	BARRICADE, MAG 130-B	LF
402801	TRAFFIC SIGNS (FOR ESTIMATING)	EA
403001	1 1/2" TS CONDUIT/SLEEVE W/ PULL WIRE	LF
403002	2" TS CONDUIT/SLEEVE W/ PULL WIRE	LF
403004	2 1/2" TS CONDUIT/SLEEVE W/ PULL WIRE	LF
403051	LEAD-IN CONDUCTOR WIRE	LF
403101	TRAFFIC SIGNAL EQUIPMENT, INTER 'A'	LS
403102	TRAFFIC SIGNAL EQUIPMENT, INTER 'B'	LS
403103	TRAFFIC SIGNAL EQUIPMENT, INTER 'C'	LS
403301	TRAFFIC SIGNAL POLES, ADOT A-TYPE	EA
403302	TRAFFIC SIGNAL POLES, ADOT Q-TYPE	EA
403303	TRAFFIC SIGNAL POLES, ADOT R-TYPE	EA
403425	MAST ARMS, 25' LENGTH	EA
403435	MAST ARMS, 35' LENGTH	EA
403440	MAST ARMS, 40' LENGTH	EA
403501	FOUNDATIONS--PER POLE TYPE--	EA
403601	SIGNAL HEADS/MOUNTINGS--PER EACH TYPE--	EA
403701	CONTROLLERS/LOAD CENTERS	EA
403801	PEDESTRIAN HEADS/BUTTONS	EA
403901	MISC. TRAFFIC SIGNAL	EA
404001	SIGNAL DETECTOR LOOPS (6 x 40)	EA
404002	COUNTER DETECTOR LOOPS (6 x 6)	EA
404011	SIGNAL DETECTOR SYSTEM (PER INTERSECTION)	LS
404012	COUNTER DETECTOR SYSTEM (COMPLETE)	LS
404201	NO. 3 1/2 PULL BOX, ADOT T.S. 1-1	EA
404202	NO. 5 PULL BOX, ADOT T.S. 1-2	EA
404204	NO. 7 PULL BOX, ADOT T.S.1-4	EA
405001	SURVEY MONUMENT, MAG 120, TYPE "A"	EA
405101	SURVEY MONUMENT, MAG 120, TYPE "B"	EA
405201	SURVEY MONUMENT, MAG 120, TYPE "C"	EA
410103	PRECAST SAFETY CURB, 3' LONG	EA
410104	PRECAST SAFETY CURB, 4' LONG	EA
410106	PRECAST SAFETY CURB, 6' LONG	EA
415001	GUARD RAIL, MAG 135	LF
415101	G4 W BEAM (TIMBER POST) ADOT C-10.04	LF
415102	G4 W BEAM (STEEL POST) ADOT C-10.05	LF
415201	FLARED BREAKAWAY CABLE (TIMBER) ADOT C-10.15	EA
415202	FLARED BREAKAWAY CABLE (STEEL) ADOT C-10.16	EA
415206	BCT (TIMBER) ADOT C-10.18	EA
415207	BCT (STEEL) ADOT C-10.17	EA
415301	W BEAM TRANSITION TO CONC BARRIER	LF
418101	GUARD POSTS, COS 2356	EA
420006	6' CHAIN LINK FENCE	LF
420007	7' CHAIN LINK FENCE	LF
424001	PARKWAY GRADING	SY
430001	DECOMPOSED GRANITE (SPECIFY THICKNESS)	SY
430002	RIVER-RUN ROCK	SY
430003	RESODDING	SY
430101	GROUND COVER, 1 GAL.	EA
430102	GROUND COVER, 5 GAL.	EA
430201	SHRUBS, 1 GAL.	EA
430202	SHRUBS, 5 GAL.	EA
430301	TREES, 1 GAL.	EA
430302	TREES, 15 GAL.	EA
430303	TREES, 24" BOX	EA
430304	TREES, 36" BOX	EA
430306	TREES, 42" BOX	EA
430308	TREES, 48" BOX	EA
430401	PALM TREES, TO 30'	EA

430402	PALM TREES, 30'+	EA
430501	SAGUARO	LF
430602	SALVAGE & RELOCATE NATIVE CACTI	LF
430611	RELOCATE PALMS	EA
430621	SALVAGE & RELOCATE NATIVE TREES	EA
430631	RELOCATE OTHER TREES	EA
430701	NATIVE PLANT SALVAGE/STORAGE	LS
430801	LANDSCAPING (FOR ESTIMATING)	LS
430811	MEDIAN LANDSCAPING	LS
430821	BACK OF CURB LANDSCAPING	LS
430831	LANDSCAPE RESTORATION (PRIV. PROP.)	LS
440001	BACKFLOW PREVENTER WITH CAGE (3/4")	EA
440002	BACKFLOW PREVENTER WITH CAGE (1")	EA
440003	BACKFLOW PREVENTER WITH CAGE (1 1/2")	EA
440004	BACKFLOW PREVENTER WITH CAGE (2")	EA
440101	CONTROL CABINET WITH CLOCK	EA
440201	IRRIGATION PIPING	LF
440261	IRRIGATION SLEEVING	LF
440301	IRRIGATION CONTROL VALVES	EA
440321	PRESSURE REGULATOR VALVES	EA
440341	IRRIGATION GATE VALVES	EA
440361	IRRIGATION FLUSH VALVES	EA
440401	IRRIGATION VALVE BOXES	EA
440501	IRRIGATION EMITTERS	EA
440521	IRRIGATION BUBBLERS	EA
440541	IRRIGATION SPRAY HEADS	EA
440701	IRRIGATION WIRING	LF
440801	MISC. IRRIGATION ITEMS	EA
440901	IRRIGATION SYSTEM (FOR ESTIMATING)	SF
440911	MEDIAN IRRIGATION SYSTEM (DRIP)	LS
440912	MEDIAN IRRIGATION SYSTEM (BUBBLER)	LS
440921	BACK OF CURB IRRIGATION	LS
440931	IRRIGATION RESTORATION (PRIVATE PROPERTY)	LS
505001	CURB INLETS @ 300' (FOR ESTIMATING)	EA
505101	CATCH BASIN, MAG 530	EA
505102	CATCH BASIN, MAG 531	EA
505103	CATCH BASIN, MAG 532	EA
505104	CATCH BASIN, MAG 533	EA
505105	CATCH BASIN, MAG 534	EA
505106	CATCH BASIN, MAG 535	EA
505111	CATCH BASIN, COP 1569 TYPE M-1, L=3	EA
505112	CATCH BASIN, COP 1569 TYPE M-2, L=3	EA
505113	CATCH BASIN, COP 1569 TYPE M-1, L=6	EA
505114	CATCH BASIN, COP 1569 TYPE M-2, L=6	EA
505115	CATCH BASIN, COP 1569 TYPE M-1, L=10	EA
505116	CATCH BASIN, COP 1569 TYPE M-2, L=10	EA
505117	CATCH BASIN, COP 1569 TYPE M-1, L=17	EA
505118	CATCH BASIN, COP 1569 TYPE M-2, L=17	EA
505121	CATCH BASIN, COP 1572, SINGLE	EA
505122	CATCH BASIN, COP 1572, DOUBLE	EA
505123	CATCH BASIN, COP 1572, TRIPLE	EA
505132	CONCRETE HEADWALL, MAG 501 12"-36"	EA
505133	CONCRETE HEADWALL, MAG 501 42"-84"	EA
505135	DROP INLET, MAG 501	EA
505191	SPECIAL CONCRETE DETAILS	EA
505192	SPECIAL CONCRETE DETAILS	EA
505401	BOX CULVERTS- CONCRETE	CY
505402	BOX CULVERTS- REINF.STEEL	LB
505461	BOX CULVERT WINGS- CONCRETE	CY
505462	BOX CULVERT WINGS- REINF. STEEL	LB
505481	BOX CULVERT APRON- CONCRETE	CY
505482	BOX CULVERT APRON- REINF. STEEL	LB
505501	__x__ BOX CULVERT (FOR ESTIMATING)	LF
505502	BOX CULVERT WINGWALLS (FOR ESTIMATING)	EA
505551	BOX CULVERTS (FOR BIDDING)	LF

505552	BOX CULVERTS (FOR BIDDING)	LS
505601	SLAB BRIDGE-CONCRETE	CY
505602	SLAB BRIDGE-REINFORCING STEEL	LB
505611	GIRDER BRIDGE-CONCRETE	CY
505612	GIRDER BRIDGE-REINFORCING STEEL	LB
505701	HALF-BARRIER (PRECAST) ADOT C-10.11	LF
505702	MEDIAN BARRIER (PRECAST) ADOT C-10.14	LF
505751	BARRIER TRANSITION (TANGENT) ADOT C-10.98	LF
505752	BARRIER TRANSITION (CURVE) ADOT C-10.99	LF
505806	6' CONCRETE RETAINING WALL	LF
505808	8' CONCRETE RETAINING WALL	LF
505810	10' CONCRETE RETAINING WALL	LF
505815	15' CONCRETE RETAINING WALL	LF
505820	20' CONCRETE RETAINING WALL	LF
505850	ARCHITECTURAL SURFACE TREATMENTS	LS
505901	ACCESS BARRIER, COP P1563	EA
505902	TRASH RACK, MAG 502	EA
505903	SPECIALITIES	EA
510004	4' CONCRETE BLOCK WALL	LF
510006	6' CONCRETE BLOCK WALL	LF
510008	8' CONCRETE BLOCK WALL	LF
515101	TRANSIT SHELTER	EA
520001	STEEL HANDRAILS, COS 2508	LF
520002	ALUMINUM HANDRAILS, COS 2508	LF
522202	WROUGHT IRON FENCES (SPECIFY HEIGHT)	LF
522401	WROUGHT IRON GATES (SPECIFY DIMS)	EA
525003	3" NON-REINFORCED GUNITE	SF
525004	4" NON-REINFORCED GUNITE	SF
525013	3" REINFORCED GUNITE	SF
525014	4" REINFORCED GUNITE	SF
602001	BORING, TO 18"	LF
602002	BORING, 18"+	LF
602101	JACKING, TO 36"	LF
602102	JACKING, 36"+	LF
603008	8" HDPE	LF
603010	10" HDPE	LF
603112	12" HDPE	LF
603115	15" HDPE	LF
603118	18" HDPE	LF
603124	24" HDPE	LF
603130	30" HDPE	LF
603136	36" HDPE	LF
610008	8" WATER LINE (FOR BIDDING)	LF
610010	10" WATER LINE (FOR BIDDING)	LF
610012	12" WATER LINE (FOR BIDDING)	LF
610104	4" ACP WATER LINE	LF
610106	6" ACP WATER LINE	LF
610108	8" ACP WATER LINE	LF
610110	10" ACP WATER LINE	LF
610112	12" ACP WATER LINE	LF
610116	16" ACP WATER LINE	LF
610204	4" PVC WATER LINE	LF
610206	6" PVC WATER LINE	LF
610208	8" PVC WATER LINE	LF
610210	10" PVC WATER LINE	LF
610212	12" PVC WATER LINE	LF
610304	4" DIP WATER LINE	LF
610306	6" DIP WATER LINE	LF
610308	8" DIP WATER LINE	LF
610310	10" DIP WATER LINE	LF
610312	12" DIP WATER LINE	LF
610316	16" DIP WATER LINE	LF
610324	24" DIP WATER LINE	LF
610414	14" CCP WATER LINE	LF
610416	16" CCP WATER LINE	LF

610424	24" CCP WATER LINE	LF
610514	14" WSP WATER LINE	LF
610516	16" WSP WATER LINE	LF
610524	24" WSP WATER LINE	LF
610601	CAST IRON FITTINGS ALLOWANCE	LB
610701	PIPE SUPPORT, MAG 403, TYPE A	EA
610702	PIPE SUPPORT, MAG 403, TYPE B	EA
610703	PIPE SUPPORT, MAG 403, TYPE C	EA
610711	CONC ENCASE, MAG 404 (REINFORCED)	LF
610712	CONC ENCASE, MAG 404 (NON-REINFORCED)	LF
610721	6" WATER LINE VERT. REALIGN, COS 2370	EA
610722	8" WATER LINE VERT. REALIGN, COS 2370	EA
610723	10" WATER LINE VERT. REALIGN, COS 2370	EA
610724	12" WATER LINE VERT. REALIGN, COS 2370	EA
610725	16" WATER LINE VERT. REALIGN, COS 2370	EA
610728	24" WATER LINE VERT. REALIGN, COS 2370	EA
610741	6" WATER LINE DIP REPLACEMENT	LF
610742	8" WATER LINE DIP REPLACEMENT	LF
610743	10" WATER LINE DIP REPLACEMENT	LF
610744	12" WATER LINE DIP REPLACEMENT	LF
610801	FIRE HYDRANT, MAG 360	EA
610802	FIRE HYDRANT BYPASS, COS 2360	EA
610803	FIRE HYDRANT RELOCATION	EA
610804	FIRE HYDRANT REPLACEMENT	EA
610806	ADJUST FIRE HYDRANT	EA
610811	WATER SERVICE CONNECTION, 3/4 INCH	EA
610812	WATER SERVICE CONNECTION, 1 INCH	EA
610813	WATER SERVICE CONNECTION, 1 1/2 INCH	EA
610814	WATER SERVICE CONNECTION, 2 INCH	EA
610841	CURB STOP, MAG 390, TYPE A	EA
610842	CURB STOP, MAG 390, TYPE B	EA
610851	RELOCATE WATER METER	EA
610861	WATER SERVICE REPLACEMENT, 3/4 TO 2 IN.	EA
610902	ELECTROLYSIS TEST STATION, 2 WIRE	EA
610904	ELECTROLYSIS TEST STATION, 4 WIRE	EA
615008	8" SAN. SEWER LINE (FOR BIDDING)	LF
615010	10" SAN. SEWER LINE (FOR BIDDING)	LF
615012	12" SAN. SEWER LINE (FOR BIDDING)	LF
615104	4" VCP SEWER LINE	LF
615106	6" VCP SEWER LINE	LF
615108	8" VCP SEWER LINE	LF
615110	10" VCP SEWER LINE	LF
615112	12" VCP SEWER LINE	LF
615115	15" VCP SEWER LINE	LF
615204	4" PVC SEWER LINE	LF
615206	6" PVC SEWER LINE	LF
615208	8" PVC SEWER LINE	LF
615210	10" PVC SEWER LINE	LF
615212	12" PVC SEWER LINE	LF
615216	16" PVC SEWER LINE	LF
615304	4" DIP SEWER LINE	LF
615306	6" DIP SEWER LINE	LF
615308	8" DIP SEWER LINE	LF
615310	10" DIP SEWER LINE	LF
615312	12" DIP SEWER LINE	LF
615316	16" DIP SEWER LINE	LF
615424	24" CONCRETE SEWER PIPE	LF
615430	30" CONCRETE SEWER PIPE	LF
615436	36" CONCRETE SEWER PIPE	LF
615448	48" CONCRETE SEWER PIPE	LF
615506	6" SEWER LINE DIP REPLACEMENT	LF
615508	8" SEWER LINE DIP REPLACEMENT	LF
615510	10" SEWER LINE DIP REPLACEMENT	LF
615512	12" SEWER LINE DIP REPLACEMENT	LF
615601	PIPE PLUG, 12" - 36", MAG 427	EA

615602	PIPE PLUG, 33" - 72", MAG 427	EA
615603	PIPE PLUG, 78" - 108", MAG 427	EA
615704	4" SEWER BUILDING CONNECTION, MAG 440	EA
615706	6" SEWER BUILDING CONNECTION, MAG 440	EA
615804	4" SEWER CLEANOUT, MAG 441	EA
615806	6" SEWER CLEANOUT, MAG 441	EA
615808	8" SEWER CLEANOUT, MAG 441	EA
618018	18" STORM DRAIN PIPE (FOR BIDDING)	LF
618024	24" STORM DRAIN PIPE (FOR BIDDING)	LF
618030	30" STORM DRAIN PIPE (FOR BIDDING)	LF
618036	36" STORM DRAIN PIPE (FOR BIDDING)	LF
618042	42" STORM DRAIN PIPE (FOR BIDDING)	LF
618054	54" STORM DRAIN PIPE (FOR BIDDING)	LF
618060	60" STORM DRAIN PIPE (FOR BIDDING)	LF
618066	66" STORM DRAIN PIPE (FOR BIDDING)	LF
618072	72" STORM DRAIN PIPE (FOR BIDDING)	LF
618084	84" STORM DRAIN PIPE (FOR BIDDING)	LF
618096	96" STORM DRAIN PIPE (FOR BIDDING)	LF
618112	12" RGRCP	LF
618115	15" RGRCP	LF
618118	18" RGRCP	LF
618124	24" RGRCP	LF
618130	30" RGRCP	LF
618136	36" RGRCP	LF
618142	42" RGRCP	LF
618148	48" RGRCP	LF
618160	60" RGRCP	LF
618172	72" RGRCP	LF
618184	84" RGRCP	LF
618196	96" RGRCP	LF
618212	12" NONREINFORCED CONCRETE PIPE	LF
618215	15" NONREINFORCED CONCRETE PIPE	LF
618218	18" NONREINFORCED CONCRETE PIPE	LF
618224	24" NONREINFORCED CONCRETE PIPE	LF
618512	12" PIPE COLLAR, MAG 505	EA
618515	15" PIPE COLLAR, MAG 505	EA
618518	18" PIPE COLLAR, MAG 505	EA
618524	24" PIPE COLLAR, MAG 505	EA
618530	30" PIPE COLLAR, MAG 505	EA
618536	36" PIPE COLLAR, MAG 505	EA
618715	15" STORM DRAIN CONNECTOR LATERAL	LF
618718	18" STORM DRAIN CONNECTOR LATERAL	LF
618721	21" STORM DRAIN CONNECTOR LATERAL	LF
618724	24" STORM DRAIN CONNECTOR LATERAL	LF
618730	30" STORM DRAIN CONNECTOR LATERAL	LF
619001	_x_ PRECAST BOX CULVERT	LF
619002	_x_ PRECAST BOX CULVERT	LF
619901	PRECAST BOX APPURTENANCES	EA
620018	18" CAST-IN-PLACE PIPE	LF
620024	24" CAST-IN-PLACE PIPE	LF
620030	30" CAST-IN-PLACE PIPE	LF
620036	36" CAST-IN-PLACE PIPE	LF
620042	42" CAST-IN-PLACE PIPE	LF
620048	48" CAST-IN-PLACE PIPE	LF
620054	54" CAST-IN-PLACE PIPE	LF
620060	60" CAST-IN-PLACE PIPE	LF
620072	72" CAST-IN-PLACE PIPE	LF
620084	84" CAST-IN-PLACE PIPE	LF
620096	96" CAST-IN-PLACE PIPE	LF
621018	18" CMP	LF
621024	24" CMP	LF
621030	30" CMP	LF
621036	36" CMP	LF
621042	42" CMP	LF
621048	48" CMP	LF

621054	54" CMP	LF
621060	60" CMP	LF
621072	72" CMP	LF
621084	84" CMP	LF
621096	96" CMP	LF
621118	18" CMP (CONCRETE LINED)	LF
621124	24" CMP (CONCRETE LINED)	LF
621130	30" CMP (CONCRETE LINED)	LF
621136	36" CMP (CONCRETE LINED)	LF
621142	42" CMP (CONCRETE LINED)	LF
621148	48" CMP (CONCRETE LINED)	LF
621154	54" CMP (CONCRETE LINED)	LF
621160	60" CMP (CONCRETE LINED)	LF
621172	72" CMP (CONCRETE LINED)	LF
621184	84" CMP (CONCRETE LINED)	LF
621196	96" CMP (CONCRETE LINED)	LF
621218	18" CMP (SMOOTH METAL LINED)	LF
621224	24" CMP (SMOOTH METAL LINED)	LF
621230	30" CMP (SMOOTH METAL LINED)	LF
621236	36" CMP (SMOOTH METAL LINED)	LF
621242	42" CMP (SMOOTH METAL LINED)	LF
621248	48" CMP (SMOOTH METAL LINED)	LF
621254	54" CMP (SMOOTH METAL LINED)	LF
621260	60" CMP (SMOOTH METAL LINED)	LF
621272	72" CMP (SMOOTH METAL LINED)	LF
621284	84" CMP (SMOOTH METAL LINED)	LF
621296	96" CMP (SMOOTH METAL LINED)	LF
621318	18" SPIRAL RIB METAL PIPE	LF
621324	24" SPIRAL RIB METAL PIPE	LF
621330	30" SPIRAL RIB METAL PIPE	LF
621336	36" SPIRAL RIB METAL PIPE	LF
621342	42" SPIRAL RIB METAL PIPE	LF
621348	48" SPIRAL RIB METAL PIPE	LF
621354	54" SPIRAL RIB METAL PIPE	LF
621360	60" SPIRAL RIB METAL PIPE	LF
621372	72" SPIRAL RIB METAL PIPE	LF
621384	84" SPIRAL RIB METAL PIPE	LF
621396	96" SPIRAL RIB METAL PIPE	LF
625001	4' DIA. MANHOLE TO 10' DEPTH, MAG 420	EA
625002	5' DIA. MANHOLE 10' TO 15' DEPTH, MAG 420	EA
625003	5' DIA. MANHOLE 15'+ DEPTH, MAG 420	EA
625011	MANHOLE DROP CONN, MAG 426, TYPE B	EA
625012	MANHOLE DROP CONN, MAG 426, TYPE A	EA
625021	STORM DRAIN MANHOLE, MAG 522 & 520	EA
625022	STORM DRAIN MANHOLE, MAG 522 & 521	EA
625023	STORM DRAIN MANHOLE, MAG 522 SHALLOW	EA
630304	4" GATE VALVE, B & C, MAG 391, TYPE C	EA
630306	6" GATE VALVE, B & C, MAG 391, TYPE C	EA
630308	8" GATE VALVE, B & C, MAG 391, TYPE C	EA
630310	10" GATE VALVE, B & C, MAG 391, TYPE C	EA
630312	12" GATE VALVE, B & C, MAG 391, TYPE C	EA
630316	16" GATE VALVE, B & C, MAG 391, TYPE C	EA
630324	24" GATE VALVE, B & C, MAG 391, TYPE C	EA
630404	4" TS & V WITH VB & C, MAG 391, TYPE C	EA
630406	6" TS & V WITH VB & C, MAG 391, TYPE C	EA
630408	8" TS & V WITH VB & C, MAG 391, TYPE C	EA
630410	10" TS & V WITH VB & C, MAG 391, TYPE C	EA
630412	12" TS & V WITH VB & C, MAG 391, TYPE C	EA
630416	16" TS & V WITH VB & C, MAG 391, TYPE C	EA
630424	24" TS & V WITH VB & C, MAG 391, TYPE C	EA
630516	16" BUTTERFLY VALVE W/ MANHOLE	EA
630524	24" BUTTERFLY VALVE W/ MANHOLE	EA
630602	2" AIR RELEASE/VACUUM VALVE, COS 2348	EA
630603	3" AIR RELEASE/VACUUM VALVE, COS 2348	EA
630604	4" AIR RELEASE/VACUUM VALVE, COS 2348	EA

630612	2" PRV, COS 2342	EA
630614	4" PRV, COS 2342	EA
630616	6" PRV, COS 2342	EA
630618	8" PRV, COS 2342	EA
630701	VALVE BOX AND COVER, CAST IRON	EA
630901	MISCELLANEOUS VALVE BOXES	EA
640101	STREET LIGHTING (FOR ESTIMATING)	LS
640301	STREET LIGHT J-BOXES	EA
640311	STREET LIGHT CONDUIT AND TRENCH	LF
640321	STREET LIGHT POLES (FOR ESTIMATING)	EA
640322	STREET LIGHT POLES	EA
640323	STREET LIGHT POLES (COUPLET STD)	EA
640324	RELOCATE STREET LIGHT POLES	EA
640401	UTILITY TRENCHING--DESIGNATE TRENCH TYPE--	LF
640402	UTILITY TRENCHING--DESIGNATE TRENCH TYPE--	LF
640601	LUMINAIRES	EA
640701	ELECTRIC CONVERSIONS	LS

APPENDIX B – CPM PLAN REVIEW COORDINATION PROCESS

The following represents typical project review coordination procedures utilized by the Capital Project Management project review staff:

A. GENERAL - Typical Review Submittals

1. Public Works Projects

a. Concept Submittal / Preliminary Drainage Study

b. First Submittal (Grade & Alignment review)

c. Right Of Way Submittal

d. Second Submittal (Progress plans)

e. Third Submittal (Completed plans)

f. Approval Submittal (Sealed plans 100% complete)

2. Facilities

a. Schematic\Program Design

b. Design Development

c. Construction Documents (90% Complete)

d. Final Const. Documents (Sealed Plans 100% complete)

B. DEVELOP PROJECT REVIEW SCHEDULE

1. Establish project review schedule utilizing division monthly report.

2. Verify project submittal dates with Project manager.

3. Coordinate project review schedule with One Stop Shop Final Plan Review.

4. Update and review schedule monthly.

C. TYPICAL PRE-SUBMITTAL PREPARATION - Prior to a scheduled project submittal

1. Verify submittal date with Project manager.

2. Coordinate with COS staff members to be included in the review process and establish time frames for their participation.

a. Designated One Stop Shop Final Plan Review staff member and deliver any noted project particulars which deviate from design criteria or General Plan.

b. Floodplain Administrator or his designee for preliminary drainage study compliance with floodplain management policies.

c. Traffic Engineering Director or his designee for approval of traffic related deviations from Master Plan, review of signalization, striping, signing and counter loop locations.

d. Field Services for review and input on landscaping and irrigation systems.

e. Field Services for review and input on pavement, signing and striping designs.

f. Facilities Maintenance for review and input on all City maintained structures and/or equipment.

g. Water Resources if project involves any facilities, main transmission, supply or trunk lines.

h. Contact Right-of-Way Agents and City's appraiser for brief presentation at right-of-way submittal.

i. Planning as may be involved with theme districts or roadway-scaping.

D. PROJECT REVIEW PERIOD - usually two weeks from date of plan submittal to Project manager

1. Upon receipt of plans, confirm review dates with other involved COS staff and provide documents for their review and apprise them of review completion deadline.

2. Obtain design criteria from the Project Coordinator.

a. Scope of work from contract.

b. Minutes of meetings which contain design criteria determination.

3. Perform plan review for:

a. Compliance with Master Plan.

b. Compliance with plan format in accordance with the Project's Scope of Work.

c. Compliance with minimum technical requirements for particular submittal per City's criteria and applicable standard specifications and details.

d. Technical accuracy.

e. Constructability.

f. Value Engineering.

g. Right-of-way utilization.

h. Compliance with COS Codes.

4. Coordinate comments with those of City Departmental reviews.

a. Schedule a meeting to resolve any conflicts in review.

b. Arrange for any required departmental input on comments.

5. Complete CPM Review comment form and incorporate with One Stop Shop Final Plan Review's comments.

a. Add to CPM's redlines the outstanding comments from One Stop Shop Final Plan Review for a single presentation of City comments.

6. Return copy of comments to Project manager.

a. Project manager to schedule a review conference with the Consultant.

b. Coordinate with any COS staff to be present at review conference.

E. POST-REVIEW ACTIVITY

1. Attend conference with consultant and Project manager to resolve review issues.

2. File review documents.

Section 1.3

Development Process

Design Standards and Policies
Revised December 1999

Chapter 1
General Considerations

SECTION 1.3
DEVELOPMENT PROCESS

Page Index

Figure List

Section 1.3

DEVELOPMENT PROCESS

1-301 PROCESSING AND REVIEW OF DEVELOPMENT APPLICATIONS

A. General

The City of Scottsdale's Development Process is designed to move development applications through the system, not only efficiently, but also in a way that produces the best possible product. The amount of time an application takes depends on many variable factors, including but not limited to: type of application, the calendar of the council, commission or board hearing the case, completeness of the application submittal and public involvement. Each type of case is discussed in detail below. Figure 1.3-1, provides a simplified schematic depiction of the Development Process. All development proposals shall begin with a Pre-Application Meeting. This mandatory meeting is part of the overall development process and is discussed in detail below.

1. Pre-Application Stage

Any person with a development proposal must first contact the Community Development Division either in person or by phone to obtain a Pre-Application Questionnaire and a list of required attachments. The Community Development Division is located at:

7447 East Indian School Road
Suite 105
Scottsdale, Arizona 85251
(SEC of Indian School Rd. and Civic Center Blvd.)
480-312-7000

The completed Pre-Application Questionnaire and required attachments shall be turned in at the Community Development Division front desk for processing. A Pre-Application Meeting will be scheduled with a Project Coordinator (PC) and held at the address listed above. This is the time for the applicant and his/her consultants to discuss pertinent development issues.

Following the Pre-Application Meeting, the PC will present the pre-application materials to the entire Community Development Division staff and solicit feedback on the development proposal with regard to drainage, traffic circulation, architectural design, landscaping, utilities, site planning, etc. For development proposals that require amendments to the General Plan (GP) or contain significant

issues, the pre-application materials will be presented in other regularly scheduled meetings to obtain additional feedback.

Next, the Technical Assistants (Tech Staff) will review the pre-application materials for major issues and report back to the PC with comments and questions. Finally, the PC will provide the applicant with a submittal checklist as well as all comments and concerns collected from staff.

2. Formal Application Stage

When the applicant is ready to proceed, a formal submittal is made to the One-Stop Shop (Suite 100) at the address listed above. The formal application shall contain all of the required materials indicated on the Submittal Shopping List and incorporate or otherwise address the feedback provided by staff. Incomplete or inadequate submittals shall be returned to the applicant. Before the case proceeds to a public hearing, the applicant will receive a formal response to the submittal in the form of a Staff Recommendation Report (Staff Report). The Staff Report will include a package of project stipulations and ordinance requirements that must be complied with. Project stipulations include design and construction requirements regarding water, sewer, paving, traffic, dedications, grading and planning as well as other conditions that must be met in order to proceed to the next step in the process.

It is imperative that the applicant and his/her consultants understand that the project stipulations are staff recommendations, which become development requirements after ratification by the presiding council, commission or board.

B. Zoning (ZN) and Use Permit (UP) Applications

This process begins with the Pre-Application process described above. The formal application shall:

1. demonstrate compliance with applicable codes, ordinances and policies
2. address staff comments and concerns
3. clearly define the impact that the development proposal will have on the subject site and surrounding properties.

All ZN and UP applications shall be presented to the Planning Commission and City Council for approval. Though the length of the process can vary, in general Zoning and Use Permit cases will be heard by the Planning Commission in roughly 8 weeks and by the City Council in roughly 11 weeks.

General Plan Amendments will increase the time required to process the application.

C. Preliminary Plat (PP) Applications

This process begins with the Pre-Application process described above. The formal application shall:

1. demonstrate compliance with applicable codes, ordinances, policies and previously approved master plans, and
2. address staff comments and concerns.

Chapter 6 of this Manual contains the submittal requirements for PP Applications. All PP applications shall be presented to the Development Review Board for approval. The PP

Staff Report includes project stipulations and ordinance requirements as well as the procedures for filing the Final Plat. Though the length of the process can vary, in general the Development Review Board will hear Preliminary Plat applications in roughly 8 weeks.

D. Development Review (DR) Applications

All commercial developments and some single-family developments require Development Review Board approval. This process begins with the Pre-Application process described above. The formal application shall:

1. demonstrate compliance with applicable codes, ordinances, policies and previously approved master plans, and
2. address staff comments and concerns.

Upon approval by the Development Review Board, the development proposal shall incorporate all of the requirements set forth in the Staff Report prior to submitting final improvement plans to Project Review. Though the length of the process can vary, in general the Development Review Board will hear this type of application in roughly 6 weeks.

E. Abandonment (AB) Applications

All requests to abandon public right-of-way including streets, alleys, GLO patent easements and roadway easements require Planning Commission and City Council approval. This process begins with the Pre-application submittal (See Figure 1.3-2.) The formal request shall demonstrate compliance with applicable codes, ordinances and the City of Scottsdale's General Plan. City staff may require additional information so that a proper analysis of the request can be made.

The abandonment application shall satisfy all application requirements and staff stipulations. These may also include stipulations from the Planning Commission and/or City Council hearings. These public hearings typically occur 6-8 weeks following staff review and acceptance of a completed abandonment application. The abandonment is approved upon City Council adoption of the abandonment resolution.

F. Meeting Dates

The meeting dates listed here are general and are subject to change based on specific holidays and the time of year. Contact Project Coordination for information about specific meeting dates.

City Council meets on the 1st and 3rd Tuesday of each month.

Planning Commission meets on the 2nd and 4th Wednesday of each month (following a City Council Meeting.)

Development Review Board meets on the 1st and 3rd Thursday of each month (following a City Council Meeting.)

Board of Adjustment meets on the 1st Wednesday of each month.

CITY of SCOTTSDALE'S DEVELOPMENT PROCESS

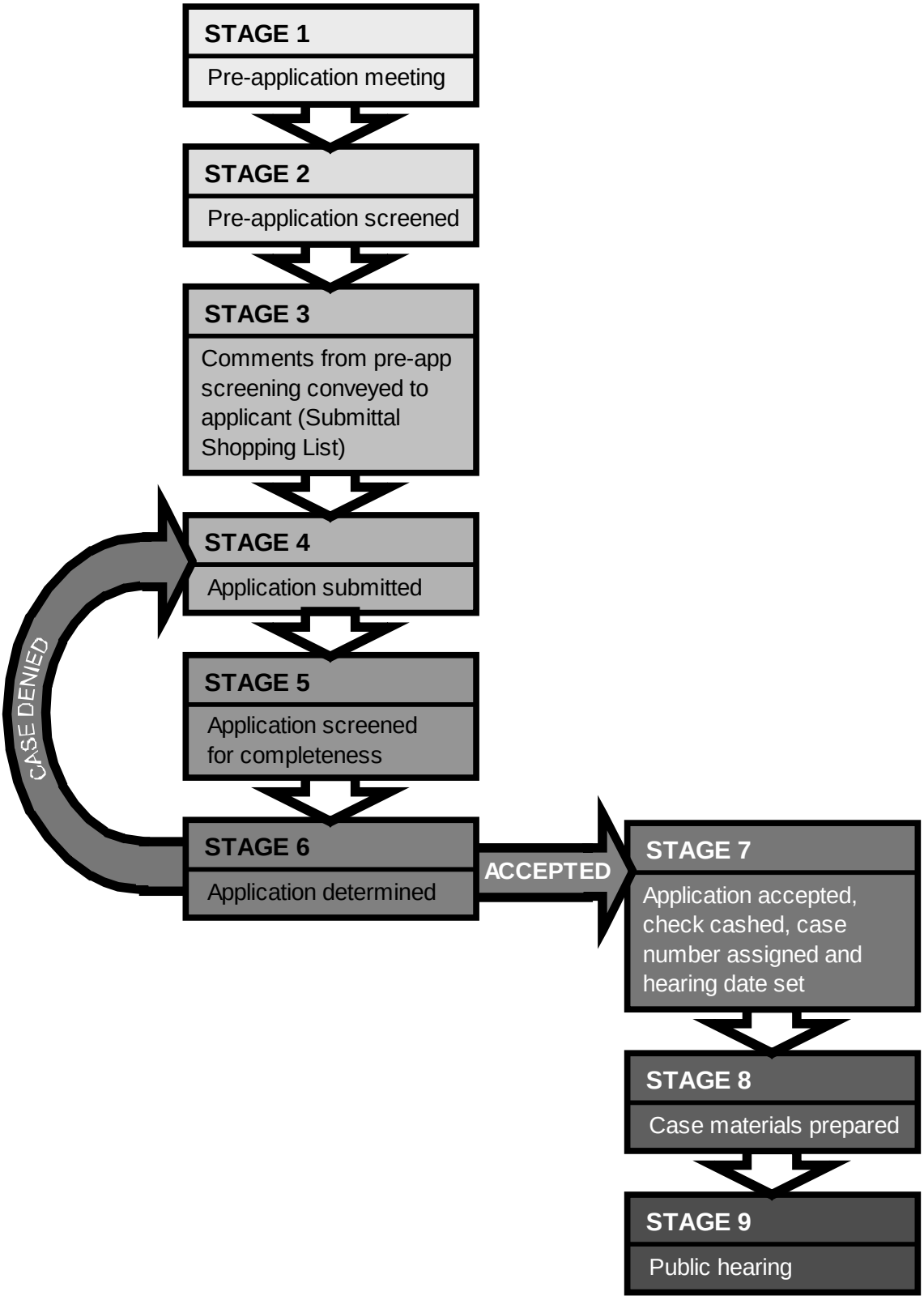
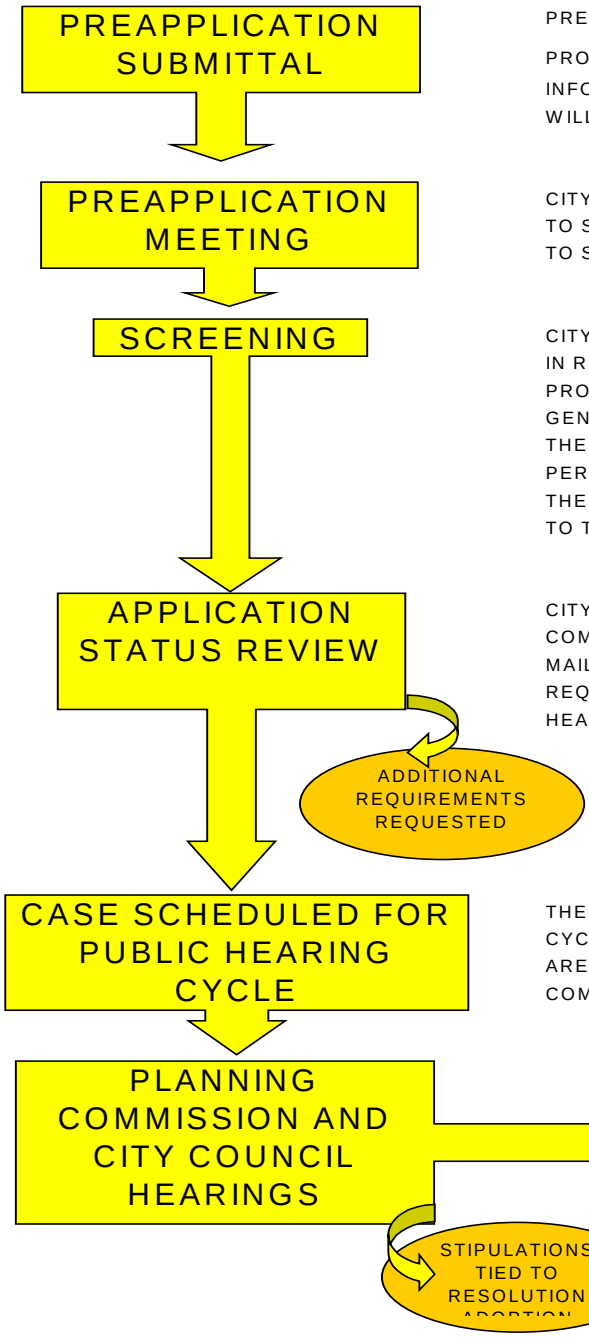


FIGURE 1.3-1

CITY of SCOTTSDALE ABANDONMENT PROCESS *



PREAPPLICATION FORMS ARE AVAILABLE IN THE CITY'S PROJECT REVIEW OFFICE. A $58 FEE AND THE REQUIRED INFORMATION LISTED ON THE PREAPPLICATION FORMS WILL BE COLLECTED AT THIS TIME.

CITY STAFF WILL CONTACT THE APPLICANT TO SCHEDULE AN INFORMATIONAL MEETING PRIOR TO SUBMITTING THE ABANDONMENT APPLICATION

CITY STAFF WILL REVIEW THE ABANDONMENT REQUEST IN RELATIONSHIP TO ITS IMPACT UPON ADJACENT PROPERTIES AND ITS CORRELATION TO THE CITY'S GENERAL PLAN AND ORDINANCE REQUIREMENTS. THE APPLICANT WILL BE INFORMED OF THE PERTINENT ISSUES IDENTIFIED BY STAFF. THE APPLICANT MAY SUBMIT THE ABANDONMENT APPLICATION TO THE CITY'S ONE-STOP SHOP AT THIS TIME.

CITY STAFF WILL REVIEW THE APPLICATION FOR COMPLETENESS. APPLICANT WILL BE NOTIFIED BY MAIL OF HEARING DATES. CITY STAFF MAY REQUEST ADDITIONAL ITEMS PRIOR TO SCHEDULING HEARING DATES.

THE CASE IS ENTERED INTO A PUBLIC HEARING CYCLE. PLANNING COMMISSION AND CITY COUNCIL HEARINGS ARE TYPICALLY HELD 6 to 8 WEEKS FOLLOWING THE COMPLETION OF THE APPLICATION STATUS REVIEW.

IN SOME CASES THE PLANNING COMMISSION OR CITY COUNCIL MAY REQUIRE THAT CERTAIN STIPULATIONS BE MET BEFORE THE ABANDONMENT RESOLUTION CAN BE ADOPTED.

FIGURE 1.3-2

1-302 Development Quality / Compliance Division Checklists

The following checklists are being provided as a guideline for those submitting final plans to the City of Scottsdale for permitting. The information contained in the following checklists is general in nature to help promote quality submittals and provide information to the public regarding general development in the City of Scottsdale. These lists are a compilation of the various requirements and policies that govern the development of any property located in a part of the City, and may or may not contain all plan review items required for your unique project. For specific information, please refer to your project's DR, PP, ZN, UP or other applicable case file, or contact your Project Coordinator.

A. General
   1. Cover Sheet Checklist
   2. Typical Sheet Checklist

B. Drainage
   1. Grading and Drainage Checklist
   2. Storm Drainage Checklist

C. Transportation
   1. Paving Checklist
   2. Signing and Pavement Marking Checklist
   3. Signalization Checklist

D. Water
   1. Potable Water Checklist
   2. Non-Potable Water Checklist

E. Wastewater
   1. Wastewater Checklist

F. Planning
   1. Final Plat Checklist
   2. Landscaping Checklist
   3. Tenant Improvement Checklist
   4. Carport Checklist

G. Other
   1. Subdivision Checklist
   2. Golf Course Checklist
   3. Commercial Checklist
   4. Stockpile Checklist

H. Single Family
   1. Single Family Checklist

I. Water or sewer reimbursements
   1. Notification form
   2. Figure 1.3.2-1 – Reimbursement checklist

CITY OF SCOTTSDALE
DEVELOPMENT QUALITY / COMPLIANCE DIVISION
*COVER SHEET CHECKLIST

PROJECT:

CASE NUMBERS: _____ZN___ _____PP___ _____DR___ _____ E___

1- REQUIREMENT SATISFIED
0 - REQUIREMENT NOT SATISFIED
? - STATUS NOT DETERMINED
+ - MORE INFORMATION REQUIRED
X - NOT APPLICABLE

1_____ **Date** _____

2_____ **Date** _____

3_____ **Date** _____

4_____ **Date** _____

* The requirements can be found in the above case numbers, the Design Standards and Policies Manual, the Scottsdale Zoning Ordinance, the Floodplain and Drainage Ordinance, and the Scottsdale Revised Code. Due to the varying nature of each project, this is only a partial checklist.

Comments :

RETURN THIS CHECKLIST WITH THE NEXT PLAN SUBMITTAL

For cover sheet format see figure 1.1-1 of DS&PM

1. Title

2. City Name

3. Vicinity Map

4. Legal Description

5. Benchmark per 1988 NAVD datum. Information on revised datum is available on the Internet at City's website at www.ci.scottsdale.az.us or by calling the Field Engineering Dept. at 480-312-5750

6. Additional information. Include the following additional information on the cover sheet. (See Figure 1.1-1 of the DS&PM).

   a. Approval blocks for signatures. (See Figure 1.1-2)

   b. City project number/case number(PP, DR, ZN, UP) & plan check number in the right hand border.

   c. "City of Scottsdale, General Construction Notes for Public Works Construction". (see Figure 1.1-3)

   d. Sheet Index

   e. Utility system ownership's.

   f. Other agency approvals as required.

   g. Engineer, Architect, and/or developer names, contacts, addresses, and telephone/fax numbers.

   h. Provide construction quantities for all work in public rights-of-way or easements. Units to conform with those found in City Code Sec.47-100. (See Encroachment Permit Fee Sheet.)

   i. Zoning as it currently exists on the property.

   j. Legend

   k. "Blue-Stake" note

   L. Key-Map

m. Assessor's parcel number

n. Native plant plan & permit number

o. The plan review fee must be submitted with the first submittal of plans.

Amount Due: $_____

Of sheets paid for: _____

p. Required retention or detention; provided retention or detention in Cubic feet

CITY OF SCOTTSDALE
DEVELOPMENT QUALITY / COMPLIANCE DIVISION
*TYPICAL SHEET CHECKLIST

PROJECT:_____

CASE NUMBERS: _____ZN____ _____PP___ _____DR___ _____ E___

1- REQUIREMENT SATISFIED
0 - REQUIREMENT NOT SATISFIED
? - STATUS NOT DETERMINED
+ - MORE INFORMATION REQUIRED
X - NOT APPLICABLE

1_____ **Date** _____

2_____ **Date** _____

3_____ **Date** _____

4_____ **Date** _____

* The requirements can be found in the above case numbers, the Design Standards and Policies Manual, the Scottsdale Zoning Ordinance, the Floodplain and Drainage Ordinance, and the Scottsdale Revised Code. Due to the varying nature of each project, this is only a partial checklist.

Comments :

RETURN THIS CHECKLIST WITH THE NEXT PLAN SUBMITTAL

1. Each sheet in the plan set must have:

    a. Standard title blocks

    b. North arrow (up or to the right)

    c. Graphic scale (horizontal and vertical)

    d. Engineer's seal, signed and dated.

2. Match lines and sheet references must be shown on each sheet and stations if applicable.

3. Plan check number in the right-hand margin.

CITY OF SCOTTSDALE
DEVELOPMENT QUALITY / COMPLIANCE DIVISION
*GRADING AND DRAINAGE CHECKLIST

PROJECT:

CASE NUMBERS: _____ZN____ _____PP___ _____DR___ _____ E___

1- REQUIREMENT SATISFIED
0 - REQUIREMENT NOT SATISFIED
? - STATUS NOT DETERMINED
+ - MORE INFORMATION REQUIRED
X - NOT APPLICABLE

1_____ **Date** _____

2_____ **Date** _____

3_____ **Date** _____

4_____ **Date** _____

* The requirements can be found in the above case numbers, the Design Standards and Policies Manual, the Scottsdale Zoning Ordinance, the Floodplain and Drainage Ordinance, and the Scottsdale Revised Code. Due to the varying nature of each project, this is only a partial checklist.
Is there an approved master drainage plan? Yes ___ No ___. If yes, give name and date of approval _____.

Comments:

RETURN THIS CHECKLIST WITH THE NEXT PLAN SUBMITTAL

I. GRADING AND DRAINAGE PLANS

A. GENERAL REQUIREMENTS

1. Cover sheet requirements per Cover Sheet checklist and DS&PM, Section 1-103.D.

2. Basic plan requirements per DS&PM, Section 1-102.

3. All lettering shall meet minimum requirements per DS&PM, Section 1-102.

4. Presentation of design and construction information shall be per DS&PM, Section 1-103.

5. Coordinate plans for this development with all adjacent projects, current and proposed. This includes private developments as well as COS Capital & Improvement Dist. Projects.

6. Provide refuse enclosures as stipulated

7. The grading and drainage plan must encompass the entire development. All lots, tracts and parcels must be shown in their entirety.

8. Show all existing and proposed improvements and utilities on and within 50 feet of this parcel.

9. Provide lot and/or subdivision boundary with bearings and distances.

10. Show all adjacent lots and streets, and identify them by name or number.
    -**NOTE**: The existing topography must be shown by contours. Spot elevations are required when the topography cannot be clearly defined by contours and immediately offsite adjacent to the parcel boundary.

11. Provide Easements Information: (Drainage , PUE, NAOS, Water, VNE, etc.)
    a. Show all existing & proposed tracts and easements on improvement plans.
    b. Provide Dedication documents, Title Report, & Exhibits for all proposed easements.

12. Provide horizontal control for all construction; such as building ties, parking dimensions and aisle widths.

13. Provide volume required (VR) and volume provided (VP) for each retention basin. (As-Built drawings including capacity calculations to be certified by a Registered Engineer at the completion of construction.)

14. A legend identifying the symbols and abbreviations used for the following items must be shown on the cover or detail sheet.

	EXISTING	PROPOSED
a.	Top of Curb	Top of Curb
b.	Ground Elevations	Ground Elevations
c.	Contour Lines	Contour Lines
d.	Flow Arrows	Flow Arrows
e.	Drainage Structures	Drainage Structures
f.	Grade Breaks	Grade Breaks
g.		Pad Elevation
h.		Finish Floor

15. Roadway improvements to be dimensioned per MAG Std Dtl. 112.

16. Provide driveway grades, grade breaks and widths per City standards

17. Provide sections at property lines, retaining walls and retention basins and at all proposed wash crossings.

18. Detail setback of slopes from property lines and buildings

19. Maximum and minimum slope requirements have been met.

20. Erosion protection required
    a. Dimension limits
    b. Show cut off walls
    c. Show rock class
    d. Provide grouting

21. Install fence or wall adjacent to open channel.

22. Install C.O.S. Std. Detail 2508 Handrail as req'd.
    a. At any vertical alignment > 4.0'
    b. At any vertical alignment > 2.5' within 10' of roadway or sidewalk/bikepath.

23. Show emergency overflow path for sump condition.

II. STRUCTURES

A. PAVING

1. Provide two (2) copies of a soils report that recommends construction specifications, recommended grading construction and pavement design sections for proposed roadways, parking spaces, and parking lot aisles.

2. Show all existing and proposed curb(s).
   a. Type of curb.
   b. Curb transitions.
   c. Horizontal & Vertical locations at transitions.

3. Show all existing and proposed pavement striping.

4. Provide thickened edge as req'd per MAG Std Dtl. 201, Type B.

5. Use vertical curbs in the parking area.

6. Show proposed grades.

7. Provide valley gutter

8. Show slope.

9. Identify grade breaks, warps, crests, and low points.

B. DRAINAGE

1. Show all existing structures, buildings and storm drainage facilities, surface water flow paths, storm and irrigation lines, lakes, and water features that affect this development

2. All portions of the development within the FEMA 100 year flood zones must be identified. Provide FEMA information block and statement of certification.

3. Demonstrate conformance with Floodplain and Drainage Ordinances. See Sec. 2.1 Appendix in the DS&PM.

4. Cross sections must be shown for retention basins. Maximum allowable side slope is 4:1. Maximum

allowable depth is 3.0 feet.

5. Show inundation limits of 100-year storm event at and around all entries to pipes, basins, and pavement.

6. No utility lines, fire lines, or service lines are permitted to pass under retention basins.

7. Provide sections and details for drainage swales, ditches, pipe culverts, and drop inlets.

8. Scupper and chute elevations are required.

9. Provide construction details for all retaining walls, block walls/fences, floodwalls, etc..

III. DRAINAGE REPORT

A. PRESENTATION

1. Drainage reports shall be prepared in accordance with DS&PM Section 2.2. Hydrology.
2. Provide all applicable supporting hydrology or hydraulic studies and improvement plans.

3. Provide results of percolation tests.

B. CALCULATIONS

1. Document peak flow calculations.

2. Provide street capacity calculations to ensure that the 10-year storm requirements are met for each street classification.

3. Provide calculations that ensure that the 10- year storm in street does not exceed top of curb, and that for the 100 year storm to remain in the ROW and at a maximum depth of 8" at the gutter flowline.

4. Document pipe capacity calculations.

5. Document inlet capacity calculations and flow-by calculations

6. Document hydraulic gradeline, flow rates, and velocity calculations.

7. Demonstrate compliance with FEMA, City Code and/or an approved master plan for F.F. Elevations.

8. Document Load Factors for all pipe culverts and any structures not COS, MAG, or ADOT standard details.

9. Document retaining wall structural calculations.

10. Document structural calculations for headwalls if not COS, MAG, or ADOT standard details.

11. Detention basin calculations shall demonstrate the required and provided volumes.

12. Show 100-year water surface elevation calculation.

C. EXHIBITS

1. Provide a topographic map showing contributory drainage areas, site or parcel boundary, peak flows (Q100 -existing and proposed) entering and exiting the parcel.

2. Provide an aerial photo (city quarter section aerials) showing site or parcel boundary.

3. The detailed site plan shall show limits of inundation for the 100 yr. event, including Retention/Detention basins & point(s) of storm water outflow.

IV. PERMITS

1. Provide proof of U.S. Army Corps 404 Permit and /or complete Scottsdale 404 Certification form for each project signed by the Owner or Engineer of Record.

2. Provide proof of ADEQ 401 Permit.

3. Provide copy of N.O.I.

4. Provide haul route permit.

5. Maricopa County Dust Control Permit is required

V. MISCELLANEOUS

1. Provide Storm Water Retention Waiver Form. See DS&PM, Sec. 2.1.

2. Provide As-built Certification Form for Retention/Detention basin(s).

3. Provide In-Lieu Fee Form for Storm Drainage Facilities per DS&PM, Sec. 2.1.

4. Release or abandonment of easements.
   Fee required $_____

5. See Storm Drain Checklist

CITY OF SCOTTSDALE
DEVELOPMENT QUALITY / COMPLIANCE DIVISION
*STORM DRAINAGE CHECKLIST

PROJECT: _____

CASE NUMBERS: _____ZN____ _____PP___ _____DR___ _____ E___

1- REQUIREMENT SATISFIED
0 - REQUIREMENT NOT SATISFIED
? - STATUS NOT DETERMINED
+ - MORE INFORMATION REQUIRED
X - NOT APPLICABLE

1_____ **Date** _____

2_____ **Date** _____

3_____ **Date** _____

4_____ **Date** _____

* The requirements can be found in the above case numbers, the Design Standards and Policies Manual, the Scottsdale Zoning Ordinance, the Floodplain and Drainage Ordinance, and the Scottsdale Revised Code. Due to the varying nature of each project, this is only a partial checklist.
Is there an approved master plan? Yes ___ No ___. If yes, give name and date of approval _____.

Comments:

RETURN THIS CHECKLIST WITH THE NEXT PLAN SUBMITTAL

I. STORM DRAINAGE PLANS

A. GENERAL REQUIREMENTS

1. Cover sheet requirements per cover sheet checklist, and DS&PM, Section 1-103.D.

2. Basic plan requirements met per DS&PM, Section 1-102.

3. Presentation of design and construction information shall be per DS&PM, Section 1-103.

4. All lettering shall meet minimum requirements per DS&PM, Section 1-102

5. Show existing ground surface in profile. Show existing contours and topographic features in plan view.

6. Include drainage structures with stations and offsets.

7. Show street names.

8. Provide construction details for catch basins and drainage structures other than C.O.S., M.A.G., or A.D.O.T. standard details.

9. Catch basins, inlets and outlets shall be compatible with pipe sizes.

10. Show headwall details.

11. Show collar, transition and manhole details.

12. Show design flows (discharge and velocity for 100-year event) at concentration points.

13. Show Easements: Drainage, PUE, Water, NAOS, VNAE, etc.

14. Cross reference sheet numbers to grading plan and street and utility plans.

15. Provide erosion protection.

16. Retention/Detention volume shall be provided. (As-Built drawings including capacity calculations

must be certified by an Engineer Registered in the State of Arizona at the completion of construction.)

17. Provide minimum clearance shall be provided (horizontal & vertical) from other utilities or underground structures. Utilities shown in plan and profile.

18. Exclude storm drain hardscape from calculated NAOS areas. Show adjustments on exhibit.

19. Design must conform with Floodplain and Drainage Ordinances.

20. Provide FEMA information block and statement of certification.(All portions of the development within the 100 yr. flood zones must be identified.)

21. No public utility lines, are permitted to pass under drainage basins

II. STRUCTURES

A. OPEN CHANNEL

1. Provide design/construction details and specifications for drop structures, energy dissipaters, etc.

2. Show flowlines and slope.

3. Provide typical cross sections for each channel reach.

4. Show lining material below design invert

5. Detail all transitional areas.

6. Freeboard shall be provided.

B. BOX CULVERT/BRIDGE

1. Show culvert profile with vertical alignments, stations, elevations, clearances, hydraulic gradeline, existing ground, design flow, frequency event, and headwater elevation.

2. Show culvert size, length, and material.

3. Provide trench and bedding details with reference to MAG specifications 601 as modified by COS.

4. Show proposed finished grade over culvert.

5. Provide structural calculations.

6. Provide cost estimate, certified by Civil Engineer.

7. Provide two (2) additional sets of plans for ADOT bridge maintenance program.

C. PIPE CULVERT

1. Show pipe profile with vertical alignments, stations, elevations, clearances, and hydraulic gradeline.

2. Show pipe size, length, material, class. (Minimum pipe size in R.O.W. or public facility is 18" diameter.)

3. Provide trench and bedding details with reference to MAG specifications 601 as modified by COS.

4. Call out private facilities on the plans.

D. STORM SEWER

1. Show catch basins, scuppers, inlets, and manholes with construction notes, stations, and offsets.

2. Show pipe size, length material, class. (Minimum pipe size for public facility is 18" diameter.)

3. Provide pipe profile with vertical alignments, stations, elevations, clearances, conflicts, and hydraulic gradelines. Show finish grade above pipe.

4. Manholes shall be shown in plan and profile at all junctions and bends. Spacing to be per DS&PM, Section 5.102-E.

5. Catch basins and curb inlets shall be referenced to COS, MAG, ADOT, or COP standards.

E. AT GRADE CROSSING

1. Provide flow capacity under roadway in accordance with City Code 37-42, #3.

2. Show limits of inundation of 100 yr. storm event.

3. Flow depth not exceed maximum allowable for 100 yr. storm event per City Code 37-42. Provide actual depth on plans as well as supporting calculations.

F. DRAINAGE BASINS

1. Provide drainage basin volume required (VR), volume provided (VP) on plans. (Final certification form including capacity calculations to be provided by an Engineer Registered in the State of Arizona.)

2. Demonstrate method of draining basin.

3. Provide overflow channel for drainage structures above grade.

4. Provide 3' maximum water depth.

5. Provide maximum side slope of 4:1.

6. Drainage basins to be located outside of rights-of-way and public easements.

7. Provide easement dedication, legal description, and exhibit for all ordinance basins and access to said basins.

8. Provide cross sections for clarity. See plan for location(s)

III. DRAINAGE REPORT

A. PRESENTATION

1. Drainage report preparations shall be within the guidelines of DS&PM, Section 2.2. Hydrology.

2. Reference all applicable hydrology or hydraulic studies and improvement plans.

B. CALCULATIONS

1. Show peak flow calculations.

2. Provide street capacity calculations.

3. Calculations shall demonstrate that 10- year storm in street does not exceed top of curb, and storm water runoff for 100 year storm to remain in ROW at a maximum depth of 8" above gutter flowline elevation.

4. Provide pipe capacity calculations.

5. Provide inlet capacity calculations and flow-by .calculations

6. Provide computer runs showing hydraulic gradeline, flow rates, and velocity calculations.

7. Provide floodwall structural calculations if applicable.

8. Provide structural calculations for headwalls if not C.O.S., M.A.G., or A.D.O.T. standard details.

9. Provide drainage basin calculations that demonstrate volumes required and provided.

10. Provide 100-year water surface elevation calculation.

C. EXHIBITS

1. *Provide a topographic map showing contributory drainage areas, site or parcel boundary, peak flows (Q100 -pre. and post-development) entering and exiting the parcel.*

2. Provide aerial photo (city quarter section aerials) showing site or parcel boundary.

3. Provide detailed site plan showing Q100 limits of inundation, drainage basins, and point(s) of storm water outflow.

IV. PERMITS

1. Provide proof of U.S. Army Corps 404 permit and/or complete a City of Scottsdale 404 certification form signed by the Owner or Engineer.

2. Provide an ADEQ 401 permit.

3. Provide copy of NOI.

4. Provide haul route permit.

5. Maricopa County Dust Control Permit is required

V. MISCELLANEOUS

1. Storm Drainage Waiver
   a. Provide copy of Approved Storm Drainage Waiver Form
   b. Provide copy of Approved In-Lieu Fee Calculation Sheet(See Sec 2.1)

2. Release or abandonment of easements.
   Fee required $_____

3. See Grading and Drainage Checklist

CITY OF SCOTTSDALE
DEVELOPMENT QUALITY / COMPLIANCE DIVISION
*PAVING CHECKLIST

PROJECT:
_____

CASE NUMBERS: _____ZN____ _____PP___ _____DR___ _____ E___

1- REQUIREMENT SATISFIED
0 - REQUIREMENT NOT SATISFIED
? - STATUS NOT DETERMINED
+ - MORE INFORMATION REQUIRED
X - NOT APPLICABLE

1_____ **Date** _____

2_____ **Date** _____

3_____ **Date** _____

4_____ **Date** _____

* The requirements can be found in the above case numbers, the Design Standards and Policies Manual, the Scottsdale Zoning Ordinance, the Floodplain and Drainage Ordinance, and the Scottsdale Revised Code. Due to the varying nature of each project, this is only a partial checklist.
Is there an approved traffic study or master circulation plan? Yes ___ No ___. If yes, give name and date of approval
_____.

Comments:

RETURN THIS CHECKLIST WITH THE NEXT PLAN SUBMITTAL

1. Cover sheet requirements per cover sheet checklist and DS&PM, Section 1-103.D.

2. Basic plan requirements met per DS&PM, Section 1-102.

3. All elevations shown on the plan must be referenced to an approved City benchmark.

4. Provide soils/pavement report indicating required pavement section.
   a. For connecting to existing streets match exist section

5. The pavement cross-section design shown on the plans must comply with City standards.

6. Typical sections for each street to be improved must be shown on the detail sheet. The sections must include the following items:
   a. Right of way width.
   b. Width of sidewalk.
   c. Width of improved surface, see the Street design manual for half street minimum width requirements.
   d. Type of curve and gutter; i.e. roll, vertical, or ribbon.
   e. Pavement cross-section. Include preservative seal coat for local and collector streets per C.O.S. Specifications 321.
   f. Minimum allowable pavement cross slope. (Inverted crowns are not allowed.)
   g. Label private streets as applicable.
   h. Label all easements.
   i. Street names.
   j. Stations.

7. Coordinate plans for this development with all adjacent projects, current and proposed. This includes private developments as well as C.O.S. Capital & Improvement Dist. Projects.

8. When bus bays or deceleration lanes are required, see the City's Street Design Manual for construction details.

9. When acceleration/deceleration lanes are required, design per DS&PM

10. The following utility reference items must be shown on each sheet:
    a. All existing utilities must be shown in plan view.
    b. All proposed utilities must be shown in plan view.
    c. Utility crossings must be shown in profile view.
    d. All manhole and valve box adjustments must be noted on the plan view.

11. The following design items must be shown on each sheet in plan view:
    a. Existing right of way, with width dimensioned.
    b. Existing pavement, with width dimensioned.
    c. Existing curbs including curb type.
    d. Existing sidewalk, with width dimensioned.
    e. Existing sidewalk ramps.
    f. Proposed right of way, with width dimensioned.
    g. Proposed pavement, with width dimensioned.
    h. Proposed curbs, with width dimensioned and reference standard detail.
    i. Proposed sidewalk, with width dimensioned and reference standard detail.
    j. Proposed sidewalk ramps.
    k. Existing items "to be protected in place or relocated" must be noted.
    l. Valley gutters at all locations that storm water will cross the street, with width and standard detail referenced.
    m. Curb transitions, with standard detail number call-out.
    n. Curb/curve data(including curb returns) per City standards.
    o. Survey monuments, with standards detail number call out.
    p. City limits where applicable.
    q. Label street names.
    r. Label streets as "public" or "private".
    s. Call out limits of construction.
    t. Show adjacent grading.
    u. Cross reference adjacent improvement plans by plan check number.
    v. "Screen in" proposed water, sewer, and storm drain facilities if applicable.
    w. Conduit crossings including traffic signal and irrigation.

12. The following design items must be shown on each sheet in profile view:
    a. Existing grade at right curb line.
    b. Existing grade at left curb line.
    c. Existing grade at centerline.
    d. Proposed grade at right curb line.
    e. Proposed grade at left curb line.
    f. Proposed grade at centerline.
    g. Proposed crown transitions at intersections.
    i. The proposed longitudinal grades must be labeled. Longitudinal grades on curves shall be computed based on their true lengths. The longitudinal grades shall comply with city standards, 0.4% minimum.
    j. Storm drain crossings.
    k. Utility and other crossings.
    l. Scupper/curb-cuts with station.
    m. Lowpoints with station.

13. The following geometric design data must be shown on each sheet and must be in conformance with City standards:

a. Station and sheet reference at all match lines in plan or profile.
b. Centerline data.
c. Station all changes in street alignment and all proposed improvements.
d. Gutter and centerline spot elevations at all grade breaks.
e. Gutter spot elevations at all intersections.
f. Centerline spot elevations at all intersections.
g. Show grade breaks in plan.
h. Tangent lengths between curves.
i. Tangent lengths at intersections.
j. Pavement tapers.
k. Intersection angles.
l. Vertical curve lengths.
m. Maximum longitudinal slope changes.
n. Barrier median construction.
o. Driveway type and station.

14. Provide sufficient existing off-site contours and spot elevations required to determine grade and direction of slope.

15. An easement or right-of-way dedication is required by one of the following:
    a. Plat.
    b. Map of Dedication
    c. Separate Instrument.
        i. Dedication Form
        ii. Legal Description & Exhibit
        iii. Title Report (6 months or less)
        iv. Copy of Plat or M.O.D. as required.

16. Provide barricades when applicable.

17. Release or abandonment of easements.

Fee required $_____

CITY OF SCOTTSDALE
DEVELOPMENT QUALITY / COMPLIANCE DIVISION
*** SIGNING AND PAVEMENT MARKING CHECKLIST**

PROJECT:
_____

CASE NUMBERS: _____ZN____ _____PP___ _____DR___ _____ E___

1- REQUIREMENT SATISFIED
0 - REQUIREMENT NOT SATISFIED
? - STATUS NOT DETERMINED
+ - MORE INFORMATION REQUIRED
X - NOT APPLICABLE

1_____ **Date** _____

2_____ **Date** _____

3_____ **Date** _____

4_____ **Date** _____

* The requirements can be found in the above case numbers, the Design Standards and Policies Manual, the Scottsdale Zoning Ordinance, the Scottsdale Revised Code The Manual on Uniform Traffic Control Devices, and A.D.O.T. Standard drawings and Specifications for Traffic Signals and Lighting. Due to the varying nature of each project, this is only a partial checklist.
Is there an approved traffic study? Yes ___ No ___. If yes, give name and date of approval _____.

Comments:

RETURN THIS CHECKLIST WITH THE NEXT PLAN SUBMITTAL

1. Conform to current "Manual on Uniform Traffic Control Devices".

2. Show existing and proposed pavement markings & signing for dedicated lane movements.

3. Show appropriate regulatory and warning signs.

4. Show appropriate channelizing markings & signs.

5. Show stop signs.

6. Show no parking signs (arterial & collector streets).

7. The following traffic engineering items must be shown in plan view:
   a. Street sign bases.
   b. Traffic control devices.
      1. Stop sign = MUTCD R1-1, 30"x 30".
      2. Speed limit = MUTCD R2-1, 24" X 30", speed per street class.
   c. Temporary turn-arounds at dead-ends streets and at phase lines.
   d. Barricades with 9 red prismatic reflectors on red sheeting MUTCD MI-9R each 10'-12' or barricade is required.
   e. Signing and striping plans for arterials and or special conditions.

8. See stipulations for project specific requirements on pavement marking and striping.

CITY OF SCOTTSDALE
DEVELOPMENT QUALITY / COMPLIANCE DIVISION
*SIGNALIZATION CHECKLIST

PROJECT:
_____

CASE NUMBERS: _____ZN____ _____PP___ _____DR___ _____ E___

1- REQUIREMENT SATISFIED
0 - REQUIREMENT NOT SATISFIED
? - STATUS NOT DETERMINED
+ - MORE INFORMATION REQUIRED
X - NOT APPLICABLE

1_____ **Date** _____

2_____ **Date** _____

3_____ **Date** _____

4_____ **Date** _____

* The requirements can be found in the above case numbers, the Design Standards and Policies Manual, the Scottsdale Zoning Ordinance, the Scottsdale Revised Code, Manual on Uniform Traffic Control Devices and A.D.O.T. Standard Drawings and Specifications for Traffic Signals and Lighting. Due to the varying nature of each project, this is only a partial checklist.
Is there an approved traffic impact study? Yes ___ No ___. If yes, give name and date of approval _____.

Comments:

RETURN THIS CHECKLIST WITH THE NEXT PLAN SUBMITTAL

1. When required, cover sheet requirements to be per cover sheet checklist and DS&PM, Section 1-103.D.

2. Basic plan requirements met per DS&PM, Section 1-102.

3. Contact Traffic Engineering & Project Review to clarify "Signal Operation & Design Requirements".

4. Plan format shall conform to DS&PM, Chapter 3, Section 3.2 - "Standard Traffic Signal Plan."

5. Use A.D.O.T drafting symbols for traffic signal preparation.

6. Include Traffic Signal Notes

7. Locate and identify ALL existing and proposed improvements, above and below ground, within 200' of intersection.

8. Locate all existing and/or proposed pavement marking and signing, include "turn-arrows" for dedicated turn lanes.

9. Locate existing vegetation (trees, etc...) which could impact required signal visibility distances.

10. Provide a "profile layout" where vertical roadway alignments may impact traffic signal visibility requirements (1"=40' scale is acceptable).

11. Install Vehicle-Count Detectors when and where required by Traffic Engineering.

12. Provide bearings for EACH leg of the intersection when deflection is greater than 2o (from 180o or 90o).

13. All traffic signal poles, conduits, and equipment must be located within public right-of-way or easement.

14. Controller and cabinet must be type 170 system with type 330 cabinet.

15. Electric service(meter) cabinet to be MYERS, MEUGL - 100TB(dual) or A.P.S./S.R.P. approved equivalent.

16. Locate signal poles, controller cabinet, electric service cabinet, and telco-intertie by station and offset dimension.

17. Provide address for electric service (meter) cabinet, available through City Records Dept.

18. One traffic signal pole per corner, unless geometrics or other considerations necessitate installation of an additional pole.

19. Provide intertie from Telco-phone-closure (20-gauge, 3 pair communication cable).

20. Provide Emergency Vehicle Signal Pre-emption, using 3M Opticom optical detectors and model 138 detector cable or City approved equivalent.

21. Locate and specify source of electric service.

22. Provide phasing diagrams for initial signal operation and 8f operation, unless otherwise directed by Traffic Engineering.

23. Conductor-schedule shall conform to note 21.

24. Install luminaries on mast arm poles, wherever overhead clearances meet or exceed utility company requirements.

CITY OF SCOTTSDALE
DEVELOPMENT QUALITY / COMPLIANCE DIVISION
*POTABLE WATER CHECKLIST

PROJECT:
_____

CASE NUMBERS: _____ZN____ _____PP___ _____DR___ _____ E___

1- REQUIREMENT SATISFIED
0 - REQUIREMENT NOT SATISFIED
? - STATUS NOT DETERMINED
+ - MORE INFORMATION REQUIRED
X - NOT APPLICABLE

1_____ **Date** _____

2_____ **Date** _____

3_____ **Date** _____

4_____ **Date** _____

* The requirements can be found in the above case numbers, the Design Standards and Policies Manual, the Scottsdale Zoning Ordinance, the Floodplain and Drainage Ordinance, and the Scottsdale Revised Code. Due to the varying nature of each project, this is only a partial checklist.
Is there an approved water master plan? Yes ___ No ___. If yes, give name and date of approval _____.

Comments:

RETURN THIS CHECKLIST WITH THE NEXT PLAN SUBMITTAL

1. Cover sheet requirements per cover sheet checklist and DS&M, Section 1-103.D.

2. Basic plan requirements met per DS&PM, Section 1-102.

3. The cover sheet shall have the statement:
   "Use Mega-Lug restraining joints or COS approved equal at all deflections, bends, tees, crosses, valves and dead-end lines."

4. Acquire Maricopa County Health Department approval and signature.

5. All elevations shown on the plans must be referenced to an approved City of Scottsdale benchmark.(NAV 1988 only) . Provide certification Statement for benchmark adequacy from Registered Engineer.

6. Coordinate plans for this development with all adjacent projects, current and proposed. This includes private developments as well as COS Capital & Improvement District Projects.

7. A portion of the improvements is shown within another jurisdiction. Coordinate and acquire the appropriate permits from said jurisdiction. Indicate the permit number on the cover sheet.

8. A service tap detail is required showing the following items:
   a. Station location of water service.
   b. Minimum 6-foot separation between water and sewer taps.
   c. Standard detail number
   d. Station location of backflow prevention device.
   e. Water meter box to be located at the BACK of the PUE

9. The water line sizes and location must conform to the City's Water Master Plan and to the approved Subdivision Master plan.

10. Show all existing water lines and nearest fire hydrants. Waterlines are required along all frontages

11. Provide station and offsets for all utilities.

12. No public utility lines are permitted to pass under drainage basins.

13. Water lines must be installed in standard horizontal locations, see the DS&PM.
    a. Call out min. vertical clearances for utility crossings in profile.
    b. Provide min. cover per COS standards.

14. Waterline materials shall conform to current COS MAG Supplemental Std Details & Specifications and with the DS&PM.

15. Provide waterline stub-outs for all adjacent properties.

16. All dip sections must be shown in profile view and must conform to COS Supplements to MAG.

17. Reference standard detail for pipe encasement when applicable.

18. Dead-end lines shall be extended beyond paved surfaces and equipped with a curb stop per COS Std. Dtl. 2390-B.

19. Valve locations must comply with DS&PM, Section 4-102.B.

20. Fire hydrant installations must comply with Rural/Metro stipulations & DS&PM requirements.

21. Provide pressure certification & flow test information on cover sheet.

22. Provide PRV detail (to be reviewed by Water Operations). Provide Engineer sealed cost estimate for PRV valve.

23. Provide Booster Pump Station plans designed in accordance with COS standards. (To be reviewed by Water Operations).

24. Provide Waterline Easements.

25. Profile lines 12" and larger.

26. Provide Maintenance and Repair Accessibility.

27. Call-out water utility provider if other than COS.

28. Provide material specifications.

29. Provide electronic locators.

30. D.I.P. required under pavement, concrete/hardscape areas, or when the waterline is not located within the roadway prism

31. Provide special details.

32. Complete Waterline Payback application (OPTIONAL)
    a. Provide Waterline Payback Waiver Form.
    (SEE FIGURES 1.3-1& 1.3-2)

33. Pay amount specified by Waterline Payback #_____.

34. In-Lieu Fee payment required.

35. Per each 300 units or a portion thereof, provide one Water Sampling Station per Sec 4.1.

36. Release or abandonment of easements.
    Fee required $_____

37. Provide a drainage report indicating the 100 year storm Q and the velocities over the proposed new pipe installations. If the flow is over 50 CFS , provide 6-foot minimum cover under the wash crossing using a Standard C.O.S. dip crossing. If the flow is Over 600 CFS, provide a scour analysis for the wash crossing. The minimum depth Of cover over the pipe would be the scour depth plus three feet.

CITY OF SCOTTSDALE
DEVELOPMENT QUALITY / COMPLIANCE DIVISION
*NON-POTABLE WATER CHECKLIST

PROJECT:
_____

CASE NUMBERS: _____ZN____ _____PP___ _____DR___ _____ E___

1- REQUIREMENT SATISFIED
0 - REQUIREMENT NOT SATISFIED
? - STATUS NOT DETERMINED
+ - MORE INFORMATION REQUIRED
X - NOT APPLICABLE

1_____ **Date** _____

2_____ **Date** _____

3_____ **Date** _____

4_____ **Date** _____

* The requirements can be found in the above case numbers, the Design Standards and Policies Manual, the Scottsdale Zoning Ordinance, the Floodplain and Drainage Ordinance, and the Scottsdale Revised Code. Due to the varying nature of each project, this is only a partial checklist.
Is there an approved reclaimed water master plan? Yes ___ No ___. If yes, give name and date of approval
_____.

Comments:

RETURN THIS CHECKLIST WITH THE NEXT PLAN SUBMITTAL

1. Cover sheet requirements per cover sheet checklist and DS&PM, Section 1-103.D.

2. Basic plan requirements met per DS&PM, Section 1-102.

3. Acquire Maricopa County Health Department approval and signature.

4. Provide documentation of "right-to-connect."

5. All elevations shown on the plans must be referenced to an approved City of Scottsdale benchmark.

6. Coordinate plans for this development with all adjacent projects, current and proposed. This includes private developments as well as COS Capital & Improvement District Projects.

7. A portion of the improvements shown within another jurisdiction. Acquire the appropriate permits. Indicate the permit number on the cover sheet.

8. Minimum 6-foot separation between water and sewer taps.

9. Provide Air-Gap detail separating non-potable and potable water.

10. Non-potable water line sizes must conform to the approved City's Master Plan.

11. Provide station and offsets for all utilities.

12. No non-potable water lines are to pass under drainage basins. This does not apply to irrigation lines downstream of the backflow prevention.

13. Non-potable water lines must be dimensioned from the street centerline.

14. Non-potable water lines must be installed in standard horizontal locations, see DS&PM.
    a. Call out min. vertical clearances for utility crossings in profile.
    b. Provide min. cover per COS standards.

15. Provide connections for non-potable water. All connections to non-potable water shall have stationing.

16. All dip sections must be shown in profile view and must conform to COS supplements to MAG.

17. Reference standard detail for pipe encasement when applicable.

18. All non-potable water line covers and lids to be labeled "Non-Potable Water".

19. Dead-end lines shall be extended beyond paved surfaces and be equipped with a corp. stop per COS Standard Detail 2390-B.

20. Valve locations must comply with DS&PM, Section 4-102.B.

21. Provide PRV detail as necessary.(to be reviewed by Water Operations) Provide Engineer sealed cost estimate for PRV valve.

22. Provide Booster Pump Station plans designed in accordance with COS standards. (To be reviewed by Water Operations).

23. Provide non-potable waterline easements as required.

24. Profile lines 12" and larger.

25. Provide Maintenance and Repair Accessibility.

26. Provide material specifications.

27. Provide longitudinal locator tape.

28. Provide electronic locators.

29. D.I.P. required under pavement, concrete/hardscape areas, or when the waterline is not located within the roadway prism.

30. Provide special details.

31. Complete Waterline Payback application (OPTIONAL)
    a. Provide Waterline Payback Waiver Form. (SEE FIGURES 1.3-1 & 1.3-2)

32. Pay amount specified by Waterline Payback. #_____.

33. In-Lieu Fee payment required.

34. Per each 300 units or a portion thereof, provide one Water Sampling Station per Sec 4.1.

35. Release or abandonment of easements.
    Fee required $_____

36. Provide a drainage report indicating the 100 year storm Q and the velocities over the proposed new pipe installations. If the flow is over 50 CFS, provide 6-foot minimum

cover under the wash crossing using a Standard C.O.S. dip crossing. If the flow is over 600 CFS, provide a scour analysis for the wash crossing. The minimum depth of cover over the pipe would be the scour depth plus three feet.

CITY OF SCOTTSDALE
DEVELOPMENT QUALITY / COMPLIANCE DIVISION
*WASTEWATER CHECKLIST

PROJECT:
_____

CASE NUMBERS: _____ZN____ _____PP___ _____DR___ _____ E___

1- REQUIREMENT SATISFIED
0 - REQUIREMENT NOT SATISFIED
? - STATUS NOT DETERMINED
+ - MORE INFORMATION REQUIRED
X - NOT APPLICABLE

1_____ **Date** _____

2_____ **Date** _____

3_____ **Date** _____

4_____ **Date** _____

* The requirements can be found in the above case numbers, the Design Standards and Policies Manual, the Scottsdale Zoning Ordinance, the Floodplain and Drainage Ordinance, and the Scottsdale Revised Code. Due to the varying nature of each project, this is only a partial checklist.
Is there an approved wastewater master plan? Yes ___ No ___. If yes, give name and date of approval
_____.

Comments:

RETURN THIS CHECKLIST WITH THE NEXT PLAN SUBMITTAL

I. WASTEWATER PLANS

A. GENERAL REQUIREMENTS

1. Cover sheet requirements per cover sheet checklist and DS&PM, Section 1-103.D.

2. Basic plans requirements met Per Section 1-102.D of DS&PM

3. Acquire Maricopa County Health Department approval and signature.

4. The following City standard notes must be shown, or corrected, on the cover or detail sheet:
    a. General notes

5. All elevations shown on the plans must be referenced to an approved City benchmark.(NAV 1988)

6. Coordinate plans for this development with all adjacent projects, current and proposed. This includes private developments as well as COS Capital & Improvement District Projects.

7. A portion of the improvements shown is within another jurisdiction. Coordinate and acquire the appropriate permits from said jurisdiction. Indicate the permit number on the cover sheet. NOTE: Provide a Monitoring Manhole at all entrances into COS system

8. Provide service to all lots/ parcels / tracts. Provide stationing for all services.

9. Minimum 6-foot horizontal separation between water and wastewater taps.

10. The wastewater line sizes must conform to the City's Wastewater Master Plan, for both size and depth.

11. Wastewater lines must conform to the approved development Wastewater Master Plan for both size and depth.

12. All existing wastewater lines being tied into must be shown in both plan and profile views.

13. All proposed wastewater lines must be shown in both plan and profile views.

14. Match lines and sheet references must be shown on each sheet and stations if applicable.

15. Dimensional ties must be provided for all existing wastewater lines being tied into. This requirement is usually satisfied by providing both a station number and a dimensional tie to the street centerline.

16. Wastewater lines shall be installed in standard horizontal locations, see DS&PM.

17. A Monitoring Manhole shall be provided on the sewer lateral. (AS APPLICABLE)

18. A Grease and Oil Interceptor shall be provided on the sewer lateral. (AS APPLICABLE)

19. The following items must be noted on the plans:
    a. Rim elevations on existing manholes.
    b. Rim elevations on proposed manholes.
    c. Invert elevations on existing manholes.
    d. Invert elevations on proposed manholes.
    e. Station numbers on existing manholes.
    f. Station numbers on proposed manholes.
    g. Offset from the street centerline to existing manholes.
    h. Offset from the street centerline to proposed manholes.
    i. Distance between manholes and/or cleanouts.
    j. Provide sequential numbering for all manholes and cleanouts.
    k. Standard detail numbers for manholes and cleanouts.
    l. Bearings on street centerlines.

20. The minimum allowable cover for a wastewater line is 4 feet.

21. Manhole and cover sizes must conform to MAG, COS, and the following standards and specifications:
    a. Invert depth 10 feet or less: 4 feet diameter manholes with 24-inch diameter covers.
    b. Invert depth greater than 10 feet: 5 feet diameter manholes with 30-inch diameter covers.

22. Bedding shall be in conformance with MAG and COS standards and specifications.

23. The wastewater line slope must be shown and must meet minimum velocity, see DS&PM.

24. Changes in slope or alignment are permitted only at manholes.

25. The maximum distances between manholes and manholes/ cleanouts must comply with the following:
    a. 15" line size or less-Manhole spacing at 500'.
    b. 18" to 30"line size-Manhole spacing at 600'.
    c. 36" to 60" line size-Manhole spacing at 800'.
    d. 60" or greater line size-Manhole spacing at 1300'.

26. All existing or proposed utility crossings must be shown in both plan and profile views. This includes water, sewer, telephone, electric, and any other buried utility lines. Minimum clearances shall be called out at all crossings.

27. Encasement shall be required, as applicable, see MAG standard detail 404.

28. All abandoned wastewater service lines must be capped.

29. A wastewater service line shall be provided for each lot with stationing.

30. A wastewater stub-out must be shown at each manhole adjacent to undeveloped property, unless otherwise justified. Wastewater stub-outs must be shown for all adjacent undeveloped property, unless otherwise justified. Wastewater stub-outs must also be provided for all major parcels within, or adjacent to, the development. Provide wastewater stub-outs for all potential extensions of system.

31. Provide a manhole service tap detail on the cover or detail sheet. A maximum of 4 wastewater laterals per manhole is permitted.

32. An easement or right-of-way dedication is required by separate instrument. Please provide the following exhibits and/or information as applicable with the completed dedication form:
    a. Subdivision name.
    b. Type of easement/right-of-way.
    c. Legal description and exhibit with RLS certification.
    d. Exhibit showing the easement/right-of-way alignment with dimensions and bearings, true point of beginning, section, township, and range.
    e. Current title report.
    f. Recording Fee? $_____

33. Provide Maintenance and Repair Accessibility.

34. Lift Station and Force Main with Maintenance Statement Reviewed by Water Ops.

a. Public lift stations and force mains shall be designed in accordance with most current water resources standards and requirements.
b. Private lift stations and force mains shall be maintained by a Home Owners Association as stated on the final plat
c. Label liftstations and force mains as public or private and indicate who is responsible for maintenance.
d. Indicate size and material of force main.

35. Provide Material Specifications.

36. Provide Special Details Required.

37. Complete Wastewater Line Payback application. (OPTIONAL)
    a. Provide Wastewater Line Payback Waiver Form
       (SEE FIGURES 1.3-1 & 1.3-2)

38. Pay amount specified by Payback #_____-

39. Release or abandonment of easements.
    Fee required $_____

40. Provide a drainage report indicating the 100-year storm Q and the velocities over the proposed new pipe installations. If the flow is over 50 CFS, provide 6 foot minimum cover under the wash crossing using a Standard C.O.S. dip crossing. If the flow is over 600 CFS, provide a scour analysis for the wash crossing. The minimum depth of cover over the pipe would be the scour depth plus three feet.

1-302.F.1 – Final Plat Checklist

Plats shall comply with Section 6.1 "Subdivision Plats" of the City's Design Standards and Policies Manual

A. COVER SHEET

1. Civil
   a. Vicinity Map.
   b. Legal Description and Township/Range.
   c. Dedication language and ratification.
   d. Notary Acknowledgement.
   e. Signature block form.
   f. Proper signatures.
   g. Warranty note.
   h. Airport Proximity notes.
   i. Assured Water Supply notes.

2. Planning
   a. Zoning
   b. Subdivision name
   c. Gross area of subdivision, minimum and average lot size
   d. Typical lot setbacks discouraged; if necessary, absolute accuracy.
   e. NAOS and/or HC dedication language.
   f. Legend or Key of Abbreviations (Completeness).

B. GENERAL

1. Civil
   a. Conformance with preliminary plat stipulations.
   b. Scale: 1" = 100' or 1" = 50', if less than 10 acres.
   c. Sheet size 24" x 36".
   d. Seal and signature of state registered Engineer/Surveyor, including standard note.
   e. Subdivision ties to fractional corners.
   f. Exception areas labeled "Not part of this plat".
   g. All existing dedications and easements labeled with Maricopa County Recorder's Book-Page and Docket No.
   h. All adjacent dedications labeled and identified.
   i. Street names shall conform to MAG Standards.

2. Planning
   a. Conformance with preliminary plat and zoning stipulations.
   b. Conformance with the approved preliminary plat layout.
   c. Property lines and dimensions of all areas.
   d. Lot area and width complies with development standards.
   e. All lots shall have legal access.

C. IDENTIFY ON PLAT

1. Civil
   a. Right-of-way lines.
   b. Bearings and distances of all property lines and street courses.
   c. Width/dimensions of all streets, alleys, easements, etc.
   d. Points of tangencies, central angles of all curvilinear streets, and radius of all rounded street line intersections.
   e. Note maintenance responsibilities of all tracts and easements.
   f. Lots numbered in consecutive order.
   g. Corners set or found.
   h. NOTE: Construction within public utility easements shall be limited to wood, wire, or removable section type fencing.

2. Planning
   a. The use and maintenance of tracts and any land not used for residential lots.
   b. Required trail easements.
   c. Required site distance easements at intersections.
   d. NOTE: homeowners Association responsible for maintenance of exterior perimeter walls.

D. SUPPLEMENTAL REQUIRED INFORMATION

1. Civil
   a. Title Report.
   b. Results of Survey.
   c. Resolutions/partnership exhibits.
   d. Streetlight Improvement District layout.
   e. Streetlight Improvement District petition.
   f. PMT (Photo-Mylar Transparency) on 8.5" x 11".

2. Planning
   a. Detailed NAOS calculations and exhibit on separate sheet (24”x36”.)
   b. List of area amounts in lots and tracts minus NAOS on 8.5" x 11".
   c. Table of on-lot NAOS requirements on 8.5" x 11", if applicable.

1-302.F.2 – Landscaping Checklist

1. Comply with the applicable Zoning, Preliminary Plat, Development Review Board, Use Permit, and/or Staff Approval stipulations.

2. Comply with the requirements of Article 10 of the Landscape Ordinance.

3. Submit on 24"x36" sheet.

4. Minimum 12 pt. type.

5. Note on plans in the bottom right corner all applicable case application numbers. (I.e.: Development Review, Use Permit, Staff Approval, plan check number.)

6. Note native plant permit number and native plant case file number.

7. City of Scottsdale Landscape Approval block (see Figure 1.1-4.)

8. City of Scottsdale Landscape Maintenance block (see Figure 1.1-5.)

9. Plant palette (type, size, and quantities).

10. Retention/Detention basin depth shall be measured to top of existing slope. Maximum 3-foot water depth is allowed. Greater depth shall require Community Development Division staff approval.

11. Maximum 10:1 width to depth ratio with a 4:1 maximum slope for retention/detention basins. Depth ratios and slopes greater than this require Community Development Division staff approval.

12. Perimeter wall elevations depicting height, color, and material type of walls. Walls shall be 6" or 8" masonry block and shall match building texture and color, both sides.

13. Provide sign elevations as approved by the Development Review Board. Add note: “SIGNS REQUIRE SEPARATE PERMIT AND APPROVAL.”

14. Show location of landscape lighting and provide details on plans.

15. All plant materials in the public right-of-way shall be on the Arizona Department of Water Resources low water plant list for the

Phoenix Active Management Area (AMA). No turf is allowed in public rights-of-way.

16. Areas of decomposed granite without plant materials/groundcovers shall not exceed 7 feet in any direction, measured between plant canopies and/or coverage.

17. Sight distance triangles shall be shown on landscape plans where driveways intersect public right-of-ways. Area within the safety triangle shall be clear of landscaping, signs or other visibility obstructions with a height greater than 2 feet. Trees within the safety triangle shall have a canopy of not less than 7 feet in height at the time of installations. All heights are measured from nearest street line elevation.

18. Show paths designed per Section 3.4 of the City of Scottsdale Design Standards and Policies Manual.

19. Show trail improvements designed per Section 7.3 of the City of Scottsdale Design Standards and Policies Manual.

20. Show all proposed Natural Area Open Space areas.

21. Provide 8% slope away from walk or curb for 5'-0" along all streets.

22. Setback all spray and stream type irrigation heads 1'0" from back of curb or sidewalk to reduce overspray, or provide design alternatives to achieve similar results to be approved by Development Quality / Compliance Division staff.

23. Identify location of reduced pressure backflow preventor and provide method for screening the device. Verify compliance of backflow device to City of Scottsdale Standard Detail 2354.

24. If applicable, provide temporary irrigation methodology for revegetated Natural Area Open Space.

1-302.F.3 – Tenant Improvement Checklist

1. Comply with the applicable Zoning, Development Review Board, Use Permit and/or Staff Approval stipulations.

2. Note the current zoning of the property.

3. Provide a vicinity map.

4. Note the previous and proposed use of the facility. If the proposed use is a conditional use, acquire a Use Permit prior to submittal of construction documents. Note the “UP” case number on the plans.

5. Note in the bottom right corner all applicable application numbers. (i.e.: Development Review, Use Permit, Staff Approval).

6. Provide parking calculations, required and provided. Indicate if project is located within a parking district or parking master plan. Parking calculations shall include number of handicap stalls and note the number of van accessible stalls.

7. All exterior mechanical and communications equipment shall be screened from offsite viewing. Ground mounted equipment, including communications equipment shall be screened a minimum of 1'- 0" above the top of the highest point of the equipment. Roof mounted equipment shall be located within roof structure or behind parapet wall at least equal in height to the top of the equipment. Material and colors of screening material shall be compatible with the building. Plans should indicate the method of screening described above.

8. Tenant improvements usually do not include exterior modifications, with some exceptions. If exterior modifications are proposed, Staff Approval or Development Review approval is required. Provide documentation and case numbers.

1-302.F.4 – Carport Checklist

1.Comply with applicable zoning, Development Review Board, and/or Staff Approval stipulations.

2.Vicinity Map.

3.Note setback of carports from structures and property lines. Carports shall have a minimum setback of 3'- 0" from the property line.

4.Carports shall be a minimum of 6'-0" from any other structure including buildings, other carports, and stairwells.

5.Roof decks shall be non-reflective and pre-finished. They shall have a minimum 4" facia on all sides.

6.Colors shall be compatible with the building.

7.Light plans/cut sheets are required. Lighting fixtures are to be fully recessed under the fascia of the canopy roof.

CITY OF SCOTTSDALE
PLANNING AND DEVELOPMENT DEPARTMENT
*SUBDIVISION CHECKLIST

PROJECT: _____

CASE NUMBERS: _____ZN____ _____PP___ _____DR___ _____ E___

1- REQUIREMENT SATISFIED
0 - REQUIREMENT NOT SATISFIED
? - STATUS NOT DETERMINED
+ - MORE INFORMATION REQUIRED
X - NOT APPLICABLE

1_____ **Date** _____

2_____ **Date** _____

3_____ **Date** _____

4_____ **Date** _____

* The requirements can be found in the above case numbers, the Design Standards and Policies Manual, the Scottsdale Zoning Ordinance, the Floodplain and Drainage Ordinance, and the Scottsdale Revised Code. Due to the varying nature of each project, this is only a partial checklist.
Are there approved master plans? Yes ___ No ___. If yes, give name and date of approval _____.
Is construction going to be phased? Yes ____ No ____.
Comments:

RETURN THIS CHECKLIST WITH THE NEXT PLAN SUBMITTAL

1. Cover sheet requirements per cover sheet checklist and DS&PM, Section 1-103.D.

2. Basic plan requirements met per DS&PM, Section 1-102.

3. A complete submittal of improvements is required including:
   a. Grading and Drainage
   b. Water
   c. Wastewater
   d. Paving
   e. Traffic
   f. Landscape
   g. Final Plat
   NOTE: See Development Review shopping list for this project.

4. The development is adjacent to a current City Project/Improvement District. Coordinate your plans with the City Project/Improvement District.

5. Portions of the improvements shown are within another jurisdiction. Coordinate and acquire the appropriate permits from said jurisdiction. Indicate the permit number on the cover sheet.

6. The development is within a proposed freeway corridor. Please coordinate the development with ADOT.

7. All dedications must be shown on the improvement plans. (R.O.W., Tracts, & Easements.)

8. A request for abandonment of existing easements and R.O.W. must be approved by Project Review. Submit Application, Utility Release of Easement form, and Legal Descriptions and Exhibits

9. All overhead utility lines must be placed underground.

10. Request for phasing shall be made in writing and shall include detailed phasing information, proposed timing of phased improvements, and any interim measures required.

11. The following requirements apply to the proposed phasing:
    a. Any proposed phasing of construction improvements shall require the approval of the Engineering Coordination Manager.
    b. All required off-site improvements should be constructed with Phase I. Deferral may require agreements and financial assurance.
    c. Interim conditions shall be designed for each phase.
    d. 100yr. access must be maintained to all phases of the development at all times.
    e. A temporary turnaround is required. It must comply with Rural Metro requirements.
    f. The wastewater system must be adequate to serve each phase.

g. The water system must be looped with each phase.
h. If a model home phase is planned, it must be identified as the first phase.

12. Improvement plans must conform to the following:
    a. ZN case stipulations.
    b. PP " " .
    c. DR " " .
    d. Final Plat requirements:
        i. The Final Plat shall be submitted with improvement plan submittal
        ii. Improvement plans must be submitted prior to Final Plat being scheduled for Council Action.
        iii. Improvement plans must be approved prior to Final Plat recordation.
    e. Master Plans:
        i. Drainage.
        ii. Water.
        iii. Wastewater.
        iv. Circulation.

    f. Other Checklists:
        i. Grading and Drainage.
        ii. Paving.
        iii. Signing and Pavement Marking.
        iv. Water(Potable and Non-Potable).
        v. Other:

        _____

        _____

        _____

        _____

        _____

13. Add the following note to the cover sheet & Grading and Drainage plans.:
    a. Pre-engineered lots with Standard House Plans.
    b. Custom homes on custom lots.
    c. Custom homes on pre-engineered lots.

14. The maintenance of landscaping within the public right-of-way shall be the responsibility of the adjacent lot owner or the Homeowners Association and shall be stated as such on the Final Plat.

15. The maintenance of retention basins shall be the responsibility of the Homeowners Association and shall be dedicated as such on the Final Plat.

CITY OF SCOTTSDALE
PLANNING AND DEVELOPMENT DEPARTMENT
*GOLF COURSE CHECKLIST

PROJECT:
_____

CASE NUMBERS: _____ZN____ _____PP___ _____DR___ _____ E___

1- REQUIREMENT SATISFIED
0 - REQUIREMENT NOT SATISFIED
? - STATUS NOT DETERMINED
+ - MORE INFORMATION REQUIRED
X - NOT APPLICABLE

1_____ **Date** _____

2_____ **Date** _____

3_____ **Date** _____

4_____ **Date** _____

* The requirements can be found in the above case numbers, the Design Standards and Policies Manual, the Scottsdale Zoning Ordinance, the Floodplain and Drainage Ordinance, and the Scottsdale Revised Code. Due to the varying nature of each project, this is only a partial checklist.
Is there an approved master community or drainage plan? Yes ___ No ___. If yes, give name and date of approval
_____.

Comments:

RETURN THIS CHECKLIST WITH THE NEXT PLAN SUBMITTAL

I. GOLF COURSE PLANS

A. ENGINEERING REQUIREMENTS

1. Cover sheet requirements per cover sheet checklist DS&PM, Section 1-301.D

2. Basic plan requirements met per DS&PM, Section 1-102.

3. Presentation of design and construction information shall be per DS&PM, Section 1-103.

4. All lettering shall meet minimum requirements per DS&PM, Section 1-102.

5. Scale shall be a 1"= 100' scale minimum unless approved in advance and shall be governed by the legibility of reduced plan sets. Any areas that require more detail shall be presented at a size where detail is adequately expressed.

6. Horizontal boundary control shall be provided

7. Q100 flows that enter and exit the golf course will be identified and shall show limits of high water elevation and the pre and post development flows.

8. A drainage report shall provide hydrologic and hydraulic information in support of the plans, provide retention calculations, size facilities, etc.

9. All retention basins shall be contained within drainage easements.

10. All water and sewer utility crossings shall be contained within water and/or sewer easements, which shall be 20' min. width.

11. Irrigation, electrical or other conduits crossing private or public ROW will cause the agreement called "Private facilities in public ROW" to be required with legal descriptions, Exhibits, and other documentation as needed.

    A Map of Dedication shall be required to dedicate all proposed easements and maintenance responsibilities. These could include, blanket drainage easements, scenic corridors, NAOS, utility easements, perimeter wall easements, retention basin easements, slope easements, public trails/multi-use trail easements, etc.

13. Internal localized golf course drainage facilities shall be maintained by the Golf Course and do not need to be shown in detail on the grade plans.

14. Show all adjacent parcel names and land uses. Show all ROW or adjacent street improvements, existing utilities, or other adjacent information.

15. Rectified aerial photos will be required by the City at project completion and prior to final Certificate of Occupancy. Verification (as-building) is required to verify all NAOS calculations, turf areas, retention basin sizing, and other calculated variables which may have been field revised. See Section III of this checklist for As-built requirements.

II. PLANNING REQUIREMENTS

A. NAOS AREAS

1. A Native Plant Permit is required in ESL areas. A plant inventory shall be provided for review by Project Review. A field inspector will be scheduled to walk the site to review the native plants.

2. An NAOS exhibit shall be made a part of the grading plan.

3. Rectified aerial photos will be required by the City at project completion and prior to the issuance of a Certificate of Occupancy (C. of O.). Verification (as-building) is required for all NAOS calculations, turf amounts, retention basin sizing, and other calculated variables which may have been field revised.

4. An NAOS letter stating the means of protection for NAOS areas will be submitted prior to construction.

5. Irrigation and landscape plan submittals are required.

III. AS-BUILT PLANNING REQUIREMENTS

1. Provide one set of bluelines of the rectified aerial photographs of the finished course.

2. Provide two sets of bluelines that show as-built area calculations for NAOS, revegetated areas and turf/hardscaping. In addition, depict revegetated areas versus undisturbed NAOS with the deletion of all hardscaping elements.

3. Have a Final Inspection with your Native Plant Inspector to sign off on the project and contact Planning to release the golf course.

4. Walk the site with the Project Coordinator to go over field changes and final configurations.

. AS-BUILT ENGINEERING REQUIREMENTS

1. The engineer shall certify that:
   a) The As-Builts represent the final field condition and have been field verified.

b) All utilities are located within dedicated Public Utility or sewer/water easements.
c) All retention basins are within dedicated drainage easements.
d) All drainage concepts and assumptions have not changed from the original approval and are in conformance with all state and local agency requirements.
e) The total retention requirements have met or that they exceed requirements from the approved master plan and/or the originally approved plan set.
f) Final map of dedication or dedications is corrected and in final form and recorded prior to final Certificate of Occupancy (C of O) release.

2. The engineer has signed and stamped all certifications.
   a.) If in any case, any of the above are not certifiable, revisions must be made accordingly to the plats, MOD, and/or separate instruments so they are in conformance and to correct for all field changes.
   b.) When all items have been completed, Final Plans will send a memo to Inspection Services and the Golf Course will be released for operation.

CITY OF SCOTTSDALE
PLANNING AND DEVELOPMENT DEPARTMENT
*COMMERCIAL CHECKLIST

PROJECT:
_____

CASE NUMBERS: _____ZN____ _____PP___ _____DR___ _____ E___

1- REQUIREMENT SATISFIED
0 - REQUIREMENT NOT SATISFIED
? - STATUS NOT DETERMINED
+ - MORE INFORMATION REQUIRED
X - NOT APPLICABLE

1_____ **Date** _____

2_____ **Date** _____

3_____ **Date** _____

4_____ **Date** _____

* The requirements can be found in the above case numbers, the Design Standards and Policies Manual, the Scottsdale Zoning Ordinance, the Floodplain and Drainage Ordinance, and the Scottsdale Revised Code. Due to the varying nature of each project, this is only a partial checklist.
Is there an approved master plan or plat? Yes ___ No ___. If yes, give name and date of approval _____.

Comments:

RETURN THIS CHECKLIST WITH THE NEXT PLAN SUBMITTAL

1. See Cover Sheet Checklist.

2. See Typical Sheet Checklist.

3. See Grading and Drainage Checklist.

4. See Storm Drainage Checklist.

5. See Paving Checklist.

6. See Signing and Pavement Marking Checklist.

7. See Signalization Checklist.

8. See Potable Water Checklist.

9. See Non-potable Water Checklist.

10. See Wastewater Checklist.

11. See Landscape Checklist.

12. See Waste Management Checklist.

13. Provide the location on the civil drawings of all large transformers Locations, cable boxes, gas services and electrical service lines. These facilities should not interfere with any onsite retention/detention basins, landscape requirements and calculations or NAOS areas. Clearly leave 2' construction space around the transformer pads for disturbance. Clearly indicate trench widths and disturbed areas in NAOS.

14. UNDERGROUND STORAGE
    a. Provide underground stormwater storage tank approvals and paperwork at first submittal to project review.
    b. Provide oil and sand separator prior to storage tank discharge.
    c. Post signage indicating "Underground Storm Water Storage Tanks" at the installation location.
    d. Provide access Manhole to underground storage tank via easement or grading.
    e. Provide wet well pump detail and specifications on the plans.

CITY OF SCOTTSDALE
PLANNING AND DEVELOPMENT DEPARTMENT
*STOCKPILE CHECKLIST

PROJECT:
_____

CASE NUMBERS: _____ZN____ _____PP___ _____DR___ _____ E___

1- REQUIREMENT SATISFIED
0 - REQUIREMENT NOT SATISFIED
? - STATUS NOT DETERMINED
+ - MORE INFORMATION REQUIRED
X - NOT APPLICABLE

1_____ **Date** _____

2_____ **Date** _____

3_____ **Date** _____

4_____ **Date** _____

* The requirements can be found in the above case numbers, the Design Standards and Policies Manual, the Scottsdale Zoning Ordinance, the Floodplain and Drainage Ordinance, and the Scottsdale Revised Code. Due to the varying nature of each project, this is only a partial checklist.
Is there an approved master drainage plan? Yes ___ No ___. If yes, give name and date of approval
_____.

Comments:

RETURN THIS CHECKLIST WITH THE NEXT PLAN SUBMITTAL

1. Provide a written letter requesting permission for a temporary stockpile.

2. Indicate a specific length of time that the stockpile is required.

3. Indicate that dust will be controlled, by whom and by what method.

4. Indicate that the stockpile(s) will not occur over any existing utility lines or within any existing easements.

5. Provide a scaled drawing indicating the location of the proposed stockpile.

6. Provide max. height of stockpile.

7. Provide volume of stockpile in cubic yards.

8. Address native plants in the stockpile area.

9. Provide details on the proposed haul route(s).

10. Provide a reproducible format for sign-off by City.

1-302.H.1 – Single Family Checklist

THE ITEMS ON THIS CHECKLIST ARE THE MINIMUM REQUIREMENTS FOR A SINGLE FAMILY PLAN SUBMITTAL. BECAUSE ALL PLANS ARE UNIQUE, THE PLAN REVIEWER MAY REQUIRE ADDITIONAL INFORMATION.

A.ENGINEERING

1) Plan sheet size 24” x 36” only
2) Scale
    a) Written
    b) Graphic
3) Acceptable Plan Scales
    a) 1”=10’
    b) 1”=20’
    c) 1/8”=1’
4) Vicinity Map
    a) North arrow
    b) 2 major cross streets
5) North arrow orientation to top or right-hand side of sheet
6) Legal Description
    a) Subdivision (Maricopa County Record (MCR) Number, Book, Page)
    b) Metes and Bounds (full legal description)
    c) Assessor’s Parcel Number (APN)
7) Site address
8) City of Scottsdale Quarter Section Number
9) Parcel Zoning
10) Name, address, and phone number for
    a) Owner
    b) Designer or Architect
    c) Engineer
11) Legend
    a) Symbols
    b) Abbreviations
12) Blue Stake Note
13) Benchmark per City of Scottsdale Database (link to web address)
14) Lot dimensions and bearings
15) Show all existing
    a) Right of Ways
    b) Easements
16) Show all proposed
    a) Right of Ways
    b) Easements
    c) Provide legal description
    d) Provide legal graphic
    e) Provide signed and notarized dedication form(s)
    f) Title report dated within 3 months
    g) Consent to Easement form, notarized and signed
17) Flood Zone Information
    a) FEMA block (on ALL plans)
    b) Engineer’s Certification Statement (if any lowest floor elevations are being set by the plan).
18) Seal, signature, and date on all sheets provided by an Arizona registered

a) Civil Engineer for grading and drainage plans
b) Architect for site plans where major grading, pad elevations, and lowest floor elevations were set by a subdivision grading and drainage plan.

19) Show existing topography
   a) Show 2' minimum interval contours for lots with more than 2' of fall across lot
   b) Show top of curb, back of curb, or edge of road elevations at lot corners for lots with less than 2' of fall across lot
20) Show proposed grading on all plans (**pre-graded lots still require fine grading**)
   a) Flow lines
   b) Slopes
   c) Breakpoints
   d) Positive drainage away from structures
21) Show lowest floor elevations for all areas of all structures.
   a) For subdivisions with grading and drainage plans for lots, the elevations have been approved on the subdivision plan.
   b) For custom lots or metes and bounds, must be set and certified by a civil engineer or architect.
   c) List as $L.F._{88}$ for lowest floor in relation to the 1988 North America Datum (NAD 88)
   d) Positive Drainage away from structures (5% min. for 10 feet)
22) Drainage report required for
   a) Metes and Bounds
   b) Special drainage features on the lot (pipes, culverts, channels)
   c) Grading in a wash
   d) Areas where no drainage study has been done
   e) Verification of Q 100 shown on plans. Provide calculations.
   f) Other_____
23) Show the following drainage information on the plan
   a) Show Q_{100} (flow rate) and ν_{100} (velocity) for all channels entering and leaving the lot
   b) Velocities over 5 fps require that the channels be protected from erosion
   c) Show washes dedicated as Drainage Easements.
      i) Washes with >50 cfs capacity and north of the Central Arizona Project canal
      ii) Washes with >25 cfs capacity and south of the Central Arizona Project canal
   d) Use arrows to show lot drainage direction on entire parcel for lots less than 2.5 acres IN ADDITION to contours or topography
   e) Show cross sections for drainage ways
      i) Dimension to footings, walls, structures
      ii) Show proposed and existing 100 year high water elevation (HWE)
      iii) To show clearly how to construct this feature
   f) Show weep holes or drainage openings in walls
24) Complete and submit Section 404 Certification Form
   a) To be signed by engineer if plan is prepared by an engineer
   b) To be signed by owner if plan is not prepared by an engineer
      i) Often applies to pre-graded lots where site plan is prepared by an architect
      ii) Often applies to additions or accessory buildings on flat lots where plan is prepared by an architect or the owner
25) Water and sewer mains
   a) Show and label existing mains with size and location
   b) Show and label proposed mains with size and location
      i) To be reviewed and approved by a separate Civil Review plan (show cross referenced plan review number on SFR plan and main ext. plan)
26) Water and sewer service
   a) For existing water meter and sewer tap show, label and dimension to lot corner

b) For proposed water meter and sewer tap show, label and dimension to lot corner, call out Mag installation details

27) Show manholes with rim elevations
   a) Upstream from sewer tap
      i) If rim elevation is lower than lowest floor elevation a backwater device is required on the sewer service line.
   b) Downstream from sewer tap
28) Show location of septic system, leach fields, and other facilities
   a) To be located 25' away from drainage easements and the 100 year high water level of washes
   b) To be located in frontage or to side of lot for future connection to sewer
   c) May not be located within Natural Area Open Space (NAOS) area.
   d) Must submit approval page from Maricopa County Health Department
   e) Note on plan: *Septic System Per Maricopa County Health Department Permit # X.*
29) Show and dimension to nearest fire hydrant in all cases
30) Driveways
   a) Show and label 50' minimum distance from centerline to centerline for return-type driveways
   b) Show and label 50' minimum distance from centerline of driveway to projected right-of-way line (applies to lots at corners and "T" intersections)
   c) Show and label 5' minimum from edge of driveway to property line at right-of-way
   d) Driveways greater than 150' in length require a special turnaround for fire trucks or approval from Rural Metro
   e) Maximum slope on driveways is 12%
   f) Maximum width at right-of-way is 16' for
      i) all front entry garages with a setback greater than 40'
      ii) all side entry garages
   g) Maximum driveway width at right-of-way is 24' for
      i) 2 car front entry garages with a setback between 20' and 40'
      ii) 3 car front entry garages with a setback between 30' and 40'
   h) Maximum driveway width at right-of-way is 30' for
      i) 3 car front entry garage with a setback between 20' and 30'
31) Retaining Walls
   a) Submit structural calculations/wall detail if retaining 3 feet or more
   b) Show detailed cross section with dimensions and specs. for steel with adjacent topography and related drainage features
   c) Show top of wall elevations and top of footing elevations
   d) Show pool retaining wall calcs. And details if different than other walls. Clearly show which walls are to be constructed in each case.
   e) Cross reference architectural wall detail and sheet number on civil plans. Attach architectural sheet for reference.
   f) Provide a copy of the soils report used for wall design
   g) Provide a letter from the soils engineer to approve the location of storm water against wall and footing
   h) If this is a reapproval for wall installation only, use the original approved plan and use delta and clouds to show the added features

   Fence walls

   a) Show all fence walls clearly. (Note: Fence walls cannot be built on-site without drainage review and proper permitting.)
32) Slope Stability
   a) Submit soils report for slopes greater than 4:1
   b) Show and label erosion protection
33) When submitting a plan for re-approval

a) “Cloud” area where revision is on the plan
b) Use a delta symbol to label the revision number and describe the revision

B. PLANNING

1. State project data for site:
   a. Zoning
   b. Net lot area
   c. % Of slope on lot
   d. Sq. ft. required and proposed NAOS, including revegetation calculation

2. Small scale site location map.

3. North arrow.

4. Written & graphic scale (1"=20' or 1"=10').

5. Name, address, & phone # of engineer/architect and owner.

6. Lot dimensions AND complete legal description and address.

7. Topography: Provide 2' contours existing & proposed.

8. Show finished floor elevations.

9. Call out elevation of roof parapet or ridge above existing natural grade.

10. Show existing and proposed ROW and easement dimensions and improvements.

11. Show all applicable utility locations & service connections from source to House including sewer, water tap locations, & septic (NOT TO BE WITHIN NATURAL AREA OPEN SPACE EASEMENT.)

12. Show required and proposed building setbacks from property line.

13. NOTE: Pool secured from unwanted access and approved through separate permit.

14. NOTE: All mechanical equipment (air conditioner, pool equipment, etc.) shall be screened a minimum of one (1) foot higher than the highest portion of the equipment, and shall be compatible with the adjacent main building. Show location of equipment on site plan & building elevations.

15. NOTE: Guest house will not provide cooking facilities & will never be offered for rent.

16. Comply with C.O.S. native plant ordinance. Show location of all protected species on the site plan. Note plant type and size (tree trunk diameter and cactus height). Indicate total # of plants disturbed by construction. Call out name of salvage contractor on plan and submit proposal for preservation of plants disturbed by construction.

17. Provide spot curb elevations (if no curb exists, provide top of pavement elevations).

18. Provide periodic top of wall and retaining wall elevations for all proposed walls. The reviewer may request existing wall elevations if warranted.

HILLSIDE AND ESLO

19. Show all areas provided to meet natural area open space dedication requirements. Note percentage and SF of natural area open space required and provided. Show location on site plan.

20. Provide legal description and graphic of natural area easement stamped by Registered Engineer/Surveyor. 8 «" x 11" size.*

21. Natural Area Easement: Form attached - to be signed by owner(s) and notarized. Return notarized original.*

22. Return notarized original Consent to Easement form attached if there is a lien/ loan or beneficiary on the property.*

23. Provide policy of title insurance to show proof of ownership and any liens/encumbrances.

24. Include Environmentally Sensitive Lands Ordinance (ESLO) criteria in ESL Upper Desert & Hillside.

25. Provide letter from engineer/surveyor stating NAOS to be field staked and secured prior to ANY site work and indicate how NAOS will be secured prior to ANY construction.

26. Landform classification (Lower Desert, Upper Desert, or Hillside).

*(Maricopa County Recorders Standards) Documents to maintain one-half inch clear margins on all sides, On 8« X 11, No faxes or copies, 10 point min type, The only person / people who can sign the dedication form are those on the most recent title report.

POSSIBLE WATER AND SEWER REINBURSMENT NOTIFICATION

Date: Civil Plan #_____

Re: Property Address_____

Tax Parcel Number_____

NOTE: THIS IS NOT THE REIMBURSEMENT AGREEMENT

Dear:

As the owner of the above referenced property, the City of Scottsdale wishes to inform you of the City's Ordinance which allows a person who has installed either a water or sewer line to be reimbursed a portion of the cost by those who later tap into the line.

IF YOU ARE A PERSON WHO IS INSTALLING A WATER OR SEWER LINE to which others may make a direct service connection, in order for you to get reimbursed, you must execute an agreement with the City of Scottsdale within 60 (sixty) days after the line has been accepted by the City. You must furnish the City of Scottsdale Project Review Dept. with the following, in order for the agreement to be executed.

1. Provide a diagram of all properties that will benefit by any main or trunk to be installed.

2. Evidence of the maximum reimbursement to you for the cost of the main or trunk installed by you.
   This will be based on actual engineering and construction costs to install the main or trunk. Copies of paid receipts must be turned in to prove payment.

3. An administration fee in the amount of five percent (5%) of the construction and engineering costs, based on the actual costs furnished in step #2, above, for the portion of the mains/trunk from which persons other than you will be served.

You understand that the Agreement for Reimbursement of you, the owner, will run for a maximum period of ten (10) years after the date of execution of the agreement. At the point of the ten (10) year period, you will not be entitled to collect reimbursement from the other property owners. You also understand that the City of Scottsdale will acquire ownership of any main or trunk installed by you upon completion and acceptance of the work by the City, and the City's cost for inspection of the work will be paid by you through the issuance of any encroachment permit.

I have read and understand the above information.
____I choose to participate
____I do not choose to participate

_____
_____
Signature of property owner* Date

STATE OF ARIZONA)
) SS.
County of Maricopa)

SUBSCRIBED AND SWORN to before me this
_____day_____
19_____by_____
_____

_____
Notary Public
My commission Expires _____
*The property owner, not his/her agent, must execute this letter. It must be signed in front of a Notary Public.

Figure 1.3.2 -1

INCOMPLETE SUBMITTALS WILL NOT BE ACCEPTED

City of Scottsdale

Water and Sewer
Reimbursement checklist

To initiate the submittal of reimbursement with the City of Scottsdale, the items listed below are the responsibility of the individual(s) to be submitted per C.O.S. Revised Code, Sec 49-215. Upon acceptance of the items by the City, a 5% administration fee will be collected at that time, of the estimated payback amount, and that **no refund** will be issued if the individual declines to initiate the reimbursement agreement.
When the City has completed verification of expenses and the agreement is ready for signature of owner(s), a final 5% administration fee will be adjusted, and if there is an over/under payment, the difference will be adjusted at that time.

Following Items to be submitted:

- Letter of Acceptance from Inspection Services
- Water/Sewer quarter section with water/sewer improvement(s) redlined
- County assessor map with parcel numbers clearly shown
- 12x18 reduced set of "approved" improvement plans with any changes redlined on the plans.
- Copy of paid receipts and invoices for work associated with main extension only which would include items listed below:

PREPARATION OF CIVIL ENGINEERING PLANS

Survey
Flow test
County Health Dept. review
Encroachment permits
Plan review fee's
Cost of installation of main extension (itemized break down of unit cost required)

When the above items have been completed for submittal, contact Bob Jorgensen, Civil Plans Reviewer at (480) 312-7066 to schedule a meeting to initiate the process or for any questions you may have.

Figure 1.3.2 -2